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AAU79864; 15-JUL-2002 (first entry) Human cystatin-8 (Zcys8) antigenic fragment #12. Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide. Homo sapiens.	ALIGNMENTS JUT 1 19864 AAU79864 standard; peptide; 52 AA.	27 117 40.6 142 7 ADD37980 Add37980 117 40.6 142 7 ADD46776 Add46706 Add46710 114 39.6 141 3 AAY96576 Ad966770 Ad966776 Ad96776 Ad966776 Ad96776 Ad9677
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The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals: Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer. BEST

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(ZYMO) ZYMOGENETICS INC.

29-AUG-2001; 2001WO-US026868.

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Claim 2; Page 98; 100pp; English.

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                         The invention describes an isolated mammalian cystatin-8 (Zcys8)

CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant

CC protein in an individual and thus inhibiting the thrombotic events

CC associated with cancer; promoting spermatogenesis, modulating seminal

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CC motility and fertilisation; and as antigenic peptides to generate

CC antibodies. Zcys8 is useful as research reagent for characterising sites

CC of interaction between Zcys8 and its receptor. Zcys8 is useful in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enhancing fertilisation during assisted reproduction in humans and in

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Matches 52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
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Pred. No. 4.1e-30;
; Mismatches 0;
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                                                    CC polypeptide (I). (I) is useful for: inhibiting cancer procagulant CC protein in an individual and thus inhibiting cancer procagulant CC associated with cancer; promoting spermatogenesis, modulating seminal CC fluid viscosity, enhancing vishility of cryopreserved sperm, sperm CC motility and fertilisation; and as antigenic peptides to generate CC entibodies. Zoys8 is useful as research reagent for characterising sites CC of interaction between Zoys8 and its receptor. Zoys8 is useful in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation are also useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zoys8 The antibodies are also useful to isolate large CC quantities of Zoys8 protein and DNA sequences that encode Zoys8 genes. CC The polynucleotide encoding (I) is useful to detect and to localise the CC expression of a Zoys8 gene in a biological sample and Zoys8 collective probes are useful for in vivo diagnosis. The CC conventions encoding (I) is useful in determining whether a subject's conventions in the Zoys8 gene like aneuploidy, gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes an isolated mammalian cystatin-8 (Zcys8)
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                                     copy number changes, insertions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ZYMO ) ZYMOGENETICS
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Pred. No. 6.8e-30;
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                                                                                 associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm comotility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8 protein and DNA sequences that encode Zcys8 genes. The antibodies are also useful to isolate large quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 gone oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
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                                                 copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 2; Page 94-95; 100pp; English.
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                 This sequence represents an antigenic fragment of human cystatin-8 (Zcys8)
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Pred. No. 1e-29;
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                                                cc motility and fertilisation; and as antigenic peptides to generate cantibodies. Zoy88 is useful as research reagent for characterising sites cof interaction between Zoy88 and its receptor. Zoy88 is useful in cc enhancing fertilisation during assisted reproduction in humans and in cc animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the creater of Zoy88. The antibodies are also useful to isolate large cc quantities of Zoy88 protein and DNA sequences that encode Zoy88 genes. Cc The polynucleotide encoding (I) is useful to detect and to localise the cxpression of a Zoy88 gene in a biological sample and Zoy88. Cc oligonucleotide probes are useful for in vivo diagnosis. The cc expression of a Zoy88 gene in a biological sample and Zoy88. Cc plynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zoy88 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and creater and genetic alterations that inactivate the Zoy88 gene.
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Best Local S
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                                                                                                                                                                                                                                                                                                                               protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper
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                                                                                                                                                                                                                                                                                                                                                                                                            The invention describes an isolated mammalian cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Page 93-94; 100pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                        polypeptide (I).
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                                  This is the amino acid sequence of human cystatin-8
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Pred. No. 1.1e-29;
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Query Match

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Length 137;

Sequence 137 AA;

Matches

Best Local Similarity

Conservative

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AAU79860
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Best Local
                                                                                                                                                                         of interaction between Zcy88 and its receptor. Zcy88 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcy88. The antibodies are also useful to isolate large quantities of Zcy88 protein and DNA sequences that encode Zcy88 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcy88 gene in a biological sample and Zcy88 genes oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcy88 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcy88 gene.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
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                                                                                                                           Sequence 46 AA;
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                                                                                                                                                                This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
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                                                                       Similarity
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                                                    Conservative
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                                                Score 248; DB 5;
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                                                                                                                                                                                                                                                                                          CC associated with cancer; promoting spermatogenesis, modulating seminal CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm CC motility and fertilisation; and as antigenic peptides to generate CC antibodies. Zcys8 is useful as research reagent for characterising sites CC of interaction between Zcys8 and its receptor. Zcys8 is useful in CC enhancing fertilisation during assisted reproduction in humans and in CC enimals. Anti-(I) antibodies are useful to screen biological samples like CC blood, urine, saliva, tissue biopsy and autopsy material in vitro for the CC presence of Zcys8. The antibodies are also useful to isolate large CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. CC The polymucleotide encoding (I) is useful to detect and to localise the CC engression of a Zcys8 gene in a biological sample and Zcys8 colymucleotide probes are useful for in vivo diagnosis. The CC copy number chances contain a mutation in the Zcys8 gene like aneuploidy, gene CC copy number chances in insertions a cys8 gene like aneuploidy, gene
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                                                                    Query Match
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                                                                                                                                     Sequence 49
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Local Similarity
les 45; Conserv
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                                Score 248;
Pred. No.
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   Mismatches
                                6.6e-25;
                                                                    DB 5;
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RESULT 8

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CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant

CC protein in an individual and thus inhibiting the thrombotic events

CC associated with cancer; promoting spermatogenesis, modulating seminal

CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm

CC motility and fertilisation; and as antigenic peptides to generate

CC antibodies. Zcys8 is useful as research reagent for characterising sites

CC of interaction between Zcys8 and its receptor. Zcys8 is useful in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enimals. Anti-(I) antibodies are useful to scoreen biological samples like

CC plood, urine, saliva, tissue biopsy and autopsy material in vitro for the

CC presence of Zcys8. The antibodies are also useful to isolate large

CC punnities of Zcys8 protein and DNA sequences that encode Zcys8 genes.

CC The polynucleotide encoding (I) is useful to detect and to localise the

CC copy number changes are useful for in vivo diagnosis. The

CC copy number changes, insertions, deletions, restriction site changes and

CC rearrangements and genetic alterations that inactivate the Zcys8 gene.

CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
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                                                                                                                                                                                                                                                  Sequence 59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-SEP-2000; 2000US-0230230P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-AUG-2001; 2001WO-US026868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200220567-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human cystatin-8 (Zcys8) antigenic fragment #14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU79866 standard; peptide; 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZYMO) ZYMOGENETICS
                                                                                                                                                                                              Local
                                                                                                                                         19 ROVIDHLEYHLNVEMOWITCOKPETINCVPOERE 52
                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gao Z,
                                                                                                                                                                                             67.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bishop
                                                                                                                                                                              0;
                                                                                                                                                                                             Score 194; DB 5;
Pred. No. 9.6e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PD;
                                                                                                                                                                            Mismatches
                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                             Length 59;
                                                                                                                                                                              Indels
                                                                                                                                                                              0
                                                                                                                                                                              Gaps
                                                                                                                                                                              0
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AAU79862 standard; peptide; 33 AA

RESULT 10
AAU79861
ID AAU79
XX
AC AAU79
XX
DT 15-JU
XX

AAU79861;

AAU79861 standard; peptide; 24 AA

15-JUL-2002

(first entry)

뭐 Ś

Matches

33;

20 OVTDHLEYHLNVEMOWTTCOKPETTNCVPOERE 52

33

Mismatches

Indels

0

Gaps

0

2.2e-17; DB 5;

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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                     associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large
                                                                                                                    quantities of ZCy88 protein and DNA sequences that encode ZCy88 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a ZCy88 gene in a biological sample and ZCy88 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the ZCy88 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the ZCy88 gene. This sequence represents an antigenic peptide of human cystatin-8 (ZCy88)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                 Sequence 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; Page 97; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-383044/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000; 2000US-0230230P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-AUG-2001; 2001WO-US026868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU79862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Holloway JL, Gao Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human cystatin-8 (Zcys8) antigenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tide (I). (I) is useful for: inhibiting cancer procoagulant
in an individual and thus inhibiting the thrombotic events
65.6%; So ilarity 100.0%; I Conservative 0;
                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bishop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PD;
                   Score 189;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fragment
                                        Length 33;
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cystatin-8

(Zcys8) antigenic

fragment #9.

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cc antibodies. Zeys8 is useful as research reagent for characterising sites cof interaction between Zeys8 and its receptor. Zeys8 is useful in cc enhancing fertilisation during assisted reproduction in humans and in cc animals. Anti-(I) antibodies are useful to screen biological samples like cc blood, urine, saliva, tissue biopsy and autopsy material in vitro for the cc presence of Zcys8. The antibodies are also useful to isolate large cc quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. Cc The polymucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 (C cligonucleotide encoding (I) is useful to detect and to localise the cc expression of a Zcys8 gene in a biological sample and Zcys8 (C cligonucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.

This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 24
Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm;
                                                             Human cystatin-8 (Zcys8) antigenic fragment #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                     15-JUL-2002
                                                                                                                                            AAU79867;
                                                                                                                                                                                 AAU79867 standard; peptide; 48
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-383044/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-SEP-2000; 2000US-0230230P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-AUG-2001; 2001WO-US026868.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200220567-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ZYMO ) ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2; Page 97; 100pp; English
                                                                                                                                                                                                                                                                                                           19 RQVTDHLEYHLNVEMQWTTCQKPE 42
                                                                                                                                                                                                                                                                                                                                                                   24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                               24 AA;
                                                                                                     (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gao Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    describes an isolated mammalian cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                      47.9%; or
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bishop
                                                                                                                                                                                                                                                                                                                                                              Score 138; DB 5;
Pred. No. 7.2e-11;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
G
                                                                                                                                                                                                                                                                                    24
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                      Length 24;
                                                                                                                                                                                                                                                                                                                                                                Indels
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                                                                                                                                                                                                                                                                                                                                                              Gaps
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RESULT 12
AAE02404
ID AAE02
X A X E X B X B X B X B X B X
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites cof interaction between Zcys8 and its receptor. Zcys8 is useful in cc enhancing fertilisation during assisted reproduction in humans and in cc animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large cc quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. Cc The polynucleotide encoding (I) is useful to detect and to localise the cexpression of a Zcys8 gene in a biological sample and Zcys8 coligonucleotide probes are useful for in vivo diagnosis. The cc chromosomes.contain a mutation in the Zcys8 gene like aneuploidy, gene cc copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.

This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                               Murine; cystatin T; zcys3; cystatin-related epididymal specific protein; CRES; inhibitor; cysteine proteinase; male reproductive tissue; testis; spermatogenesis; therapy; reproductive disorder.
                                                                                                                      Murine cystatin-related epididymal
                                                                                                                                                         10-AUG-2001
                                                                                                                                                                                            AAE02404;
                                                                                                                                                                                                                               AAE02404 standard; protein; 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein in an individual and thus inhibiting the thrombotic associated with cancer; promoting spermatogenesis, modulating fluid viscosity, enhancing viability of cryopreserved sperm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leto inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Holloway JL,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Page 99; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sperm motility; fertilisation; antigenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-AUG-2001; 2001WO-US026868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200220567-A2
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                                                                                                                                                                                                                                                                                                                                               30 NVEMOWTTCQKPETTNCVPQERE 52
                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                      NVEMONTTCOKPETTNCVPQERE 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (H)
                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        describes an isolated mammalian cystatin-8 (I) is useful for: inhibiting cancer pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gao Z,
                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                           46.2%; Score 133; I
100.0%; Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bishop PD;
                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                 A
                                                                                                                      specific protein (CRES).
                                                                                                                                                                                                                                                                                                                                                                                                                             DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                            .3e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer procoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 48;
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       events
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0

Mus musculus

22-MAY-2001

99US-00431480

US6235708-B1

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  Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to cystatin T (also known as zcys3) DNA and protein sequences. Cystatin T is testis specific and is homologous to cystatin-related epididymal specific gene (CRES) and type 2 cystatins. Cystatins inhibit cysteine proteinases and are found with male reproductive tissues and secretions. Cystatin T sequence is useful for modulating spermatogenesis and studying, diagnosing and treating reproductive disorders. The present sequence is murine cystatin-related epididymal specific (CRES) protein
                                                                                                                                                                                                                                                   Mouse; cystatin T; zcys3; testis specific; cystatin-related epididymal specific gene; sperm production; antiinfertility.
                                                                                                                                                                                                                                                                                                        Mouse
                                                                                                                                                                                                                                                                                                                                04-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                AAE04433 standard; protein; 142 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin T polypeptides are useful for modulating spermatogenesis studying, diagnosing and treating reproductive disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-NOV-1998;
28-SEP-1999;
New polynucleotides encoding testis-specific cystatin-like protein
                         WPI; 2001-407271/43
                                                                                                                          20-NOV-1998;
                                                                                                                                                   17-JUL-2000; 2000US-00617302.
                                                                                                                                                                             12-JUN-2001.
                                                                                                                                                                                                    US6245529-B1
                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Col 45-46; 32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-342846/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ZYMO ) ZYMOGENETICS INC
                                                                           (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                       cystatin-related epididymal specific
                                                                                                                                                                                                                                                                                                                                                                                                                                              58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             KESEDKYVFLVDKILHAKLQITDRMEYQIDVQISRSNCKKFLNNTENCIPQKK 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                            KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                                                                                                                                                                                                                                                                (first entry)
                                                  Feldhaus
                                                                                                98US-0109217P.
99US-0156382P.
99US-00431480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Feldhaus AL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0109217P.
99US-0156382P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          45.5%; Score 131; DB 4;
41.5%; Pred. No. 4.7e-09;
                                                  Ł;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                              spermatogenesis modulator;
CRES; gene therapy;
                                                                                                                                                                                                                                                                                                       (CRES)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 142;
                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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The present invention describes a mouse spermatogenesis gene cluster containing 89 genes (see the cDNA sequences of ADA14442 to ADA14530). Also described: (1) a cDNA library containing cDNA encoding the gene cluster; (2) oligonuclectides of 10-99 bases containing partial sequences of genes of the cluster; (3) microarrays containing these

Mouse spermatogenesis gene cluster and human male sterility associated genes, useful for diagnosis of human male sterility and testing

Claim 6; Page 155; 262pp; Japanese substances for reproductive toxicity. WPI; 2003-671663/63. N-PSDB; ADA14477.

Nishimune Y,

Tanaka

ŗ,

Nozaki M;

14-FEB-2002; 2002JP-00036649. 27-DEC-2002; 2002JP-00381241.

(NISC-) JAPAN SCI & TECHNOLOGY CORP

14-FEB-2003; 2003WO-JP001572

21-AUG-2003

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ADAL14374
ADAL14374
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            be used to study or modulate that function in in vitro or in vivo systems. In particular, it is also useful for enhancing sperm production, increasing the number of viable sperm in a sample, or enhancing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  reproductive toxicity; reproductive capacity; mutation; expression abnormality; human male sterility associated gene; succinyl CoA:3-oxo acid CoA transferase; human male sterility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-NOV-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          spermatogenesis; gene cluster; mutagenicity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER
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Pred. No. 4.7e-09;
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oligonucleotides; (4) primer sets for PCR amplification of cDNA or genomic DNA for genes of the cluster; (5) polypeptides encoded by the genes in the cluster; (6) antibodies to these polypeptides; (7) a method for testing the mutagenicity and reproductive toxicity of a test substance, and assessment of the reproductive capacity of a test

preparing a medicament for treating pain in an animal.

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RESULT 15
ADD46708
ID ADD46
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Best Local S
Matches 22
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(FARB )
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01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
GENBANK; AAC36317
                             WPI; 2003-268312/26
                                                                                    Woolf C, D'urso D,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rat Protein AAC36317, SEQ ID NO 12393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADD46708 standard; protein; 142 AA
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BAYER AG.
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New composition comprising two or more isolated polypeptides, useful for

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cc subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially cc expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity in an animal of one or more of the polynucleotides, a method for identifying a pharmaceutical composition, a compound or small molecule that regulates the cativity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more completed or their antibodies. The polynucleotide or the compound that complete the activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Chung), chronic constriction conjury (CCI) and spared nerve injury (Chung), chronic constriction conjury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene cherapy). The sequence presented is a rat protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note:

The sequence data for this patent did not form part of the printed form part of the printed construction construction construction construction construction construction construction construction construction const
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention discloses a composition comprising two or more isolated rat or human polymucleotides or a polymucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polymucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polymucleotide sequence that is differentially expressed in neuronal tissue of a first animal that is differentially expressed in neuronal tissue of a first animal
                                                                               specification, but was obtained in electronic form directly from WIPO at
ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page; 1017pp; English.
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5 맑 Matches Best Local Query Match _ Similarity KESDDKYHERIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQE 50 KGSEDKYLFLLDKTLHATLQITDRMEYHIDVQISRSNCRKPLNNTENCIPQK 109 Conservative 43.1%; 13; Mismatches Score 124; DB 7; Pred. No. 3.9e-08; Length 142; Indels 2 Gaps ۲,

Sequence 142 AA;

Search completed: March Job time: 43.5565 secs 23, 2004, 17:10:27

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Result
No.
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  Query
Match
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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/BACMB.pep:*
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288
1 KESDDKYHFRIFRV
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Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2004 Compugen Ltd.
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 DB
                         US-09-431-480-3
US-09-431-480-4
US-09-431-480-2
US-09-431-480-2
US-09-617-302-4
US-09-617-302-2
US-08-849-303-19
US-09-886-319A-48
US-09-886-319A-48
US-09-775-932-2
$432264-4
US-08-832-535-11
US-08-8791-522-3
US-08-794-118-3
US-09-617-402-6
US-09-19-485-4
US-09-617-302-6
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US-09-617-302-6
US-09-618-3-7
US-09-886-319A-47
US-09-940-497-3
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            Sequence 3, Appli
Sequence 4, Appli
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Sequence 2, Appli
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Sequence 46, Appli
Sequence 48, Appli
Sequence 3, Appli
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RESULT 2 US-09-617-302. Sequence 3, Patent No. GENERAL INFO APPLICANT: APPLICANT: TITLE OF 11 FILE REFERI CURRENT APPLICARENT APPLICANT APPLICANT APPLICANT APPLICANT APPLICATED APPLICATION APPLICATED APPLICATION APPLICATED APPLICATION APPLICATED APPLICATION APPLICATED APPLICATION APPLICATED APPLI	Query M Best Lo Matches Qy	RESULT 1 Sequence 3, Sequence 3, Patent No. 6 GENERAL INFO APPLICANT: APPLICANT: APPLICANT: APPLICANT APPLICANT CURRENT FILE EARLIER APPLICANT	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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617302 L. L. SPECIF SPECIF US/09/ 7-17 7-17 9/431, 0/109, 0/109, 0/156,	Score Fred. 16; Mi 16; Mi QRQVTDHL	3148 BCIF S/09 0/10 0/10 0/10 20 0/15 Ver	
IC CYSTATIN- 617,302 480 217	e 131; . No. 3. ismatche ismtche LEYHLNVE : :: :	10 CYSTATIN-LIKE 1/431,480 19,217 16,382 19	-09-617-302-5 -08-849-303-1 -08-849-303-1 -09-775-932-1 -09-775-932-1 -09-314-777-4 -09-314-777-1 -08-849-303-1 -08-849-303-2 -09-741-776-6 -09-241-776-932-1 -08-849-303-2 -08-849-303-2 -08-849-303-2 -08-849-303-2 -09-775-932-1 -09-775-932-1
LIKE	DB 3; L 1e-11; :s 13; :mQWTTCQX : : : PISRSNCKX		111115 111115 111115 111115 111115 111115 111115 111115 111115
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; ORGANISM: Homo sapiens
US-09-617-302-4
                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
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                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Hollowsy, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE
FILE REFERENCE: 98-72 C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/09617302
Patent No. 6245529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 22
SOFTWARE: FRANCEQ for Windows Version 3.0
SEQ ID NO 4
LENGTH: 142
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Patent No. 6235708
GENERAL INFORMATION:
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                                                                                        SEQ ID NO 4
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                                                                                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ fo:
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APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
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TYPE: PRT
ORGANISM: Mus musculus
                                                                LENGTH: 142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 40.6%; Score 117; DB 3; Length 142; Similarity 48.1%; Pred. No. 3.3e-09; 25; Conservative 11; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 41.9
22; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KESDDKYHERIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN---CVPQE 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KESEDKYVFLVDKILHAKLQITDRMEYQIDVQISRSNCKKPLNNTENCIPQKK 110
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                                                                                                               for Windows Version 3.0
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                                                                                                                                                                                                                                                                                                                                                                     PROTEIN CYSTATIN
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APPLICANT: Hollowy, James L.
APPLICANT: Foldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1999-11-20
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/109,382
PRIOR PRIOR APPLICATION NUMBER: 60/109,382
PRIOR PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 7999-09-28
PRIOR FILING DATE: 7999-09-28
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SEQ ID NO 2
LENGTH: 141
                                                                                          Matches
                                                                                                                                                                                                                                                                        SEQ ID NO 2
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Patent No. 6245529
                                                                                                                                     Query Match
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Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE
FILE REFERENCE: 98-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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                                                                                                                                                                                                     TYPE: PRT ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                   LENGTH:
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Local Similarity 44.2%;
hes 23; Conservative 11
                                                                                        Local Similarity
les 23; Conserv
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                                                                                                                                                                                                                                                     141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARIMCKKIAGDNENCLFQQ 108
KASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARTMCKKIAGDNENCLFQQ 108
                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                           39.6%;
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48.1%; Pred. No. 3.3e-09;
ative 11; Mismatches 14
                                                                                          11; Mismatches
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Pred. No. 8.8e-09;
1; Mismatches 16
                                                                                                           Score 114; DB 3;
Pred. No. 8.8e-09;
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                                                                                                                                   Length 141;
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                                                                                          Indels
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                                                                                        Gaps
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US-08-849-303-19

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; MOLECULE TYPE: p.; HYPOTHETICAL: NO US-08-849-303-19
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                                                                                                                                                                                                                                                                                     Sequence 46, Application US/09886319A Patent No. 6586185
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
               APPLICANT: Werner, Sabine
APPLICANT: Halle, Jorn-Peter
APPLICANT: Regenbogen, Johannes
APPLICANT: Regenbogen, Johannes
APPLICANT: Goppelt, Andreas
TITLE OF INVENTION: Use of Polypeptides or Nucleic Acids for
TITLE OF INVENTION: the Diagnosis or Treatment of Skin Disorders and Wound
TITLE OF INVENTION: Healing and for the Identification of Pharmacologically
TITLE OF INVENTION: Active Substances
FILE REFERENCE: 50125/014002
CURRENT APPLICATION NUMBER: US/09/886,319A
CURRENT FILING DATE: 2001-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                              APPLICANT: Wolf, Eckard
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MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: 201-343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Jackson Bsq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 411 Hackensack Avenue, 4th Floor CITY: Hackensack
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APPLICATION NUMBER: US 60/222,081
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10, 6680424
                                                                                                                                                                                                                                                                  INFORMATION:
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McPherson, Michael J.
Urwin, Peter E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.8%; Score 106; DB 4; Length 127;
43.8%; Pred. No. 1.1e-07;
tive 11; Mismatches 14; Indels
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US-09-775-932-2
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US-09-886-319A-48
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APPLICANT: University of British Columbia TITLE OF INVENTION: Production and use of N FILE REFERENCE: $8069

CURRENT APPLICATION NUMBER: US/09/775,932

CURRENT FILING DATE: 2001-02-02

PRIOR APPLICATION NUMBER: CA99/00717

PRIOR FILING DATE: 1999-08-05

PRIOR FILING DATE: 1999-08-05

PRIOR FILING DATE: 1998-08-05

NUMBER OF SEQ ID NOS: 32
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APPLICANT: Werner, Sabin
APPLICANT: Halle, Jorn-I
APPLICANT: Regenbogen, APPLICANT: Goppelt, And
                                                                                                                                                                                    Sequence 2, Application US/09775932
Patent No. 6534477
GENERAL INFORMATION:
APPLICANT: University of British Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. 6586185
GENERAL INFORMATION:
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/886,319A CURRENT FILING DATE: 2001-06-20 PRIOR APPLICATION NUMBER: US 60/222,081 PRIOR FILING DATE: 2000-08-01 PRIOR APPLICATION NUMBER: DE 10030149.5 PRIOR FILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Goppelt, Andreas
TITLE OF INVENTION: Use of Polypeptides or Nucleic Acids for
TITLE OF INVENTION: the Diagnosis or Treatment of Skin Disorders and Wound
TITLE OF INVENTION: Healing and for the Identification of Pharmacologically
TITLE OF INVENTION: Active Substances
FILE REFERENCE: 50125/014002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-08-01
PRIOR APPLICATION NUMBER: DE 10030149.5
PRIOR FILING DATE: 2000-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 84
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ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
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mes 20; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
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                                                                                                                                                                                                                                                                                                                                                      KGSNDAYHSRAIQVVRARKQLVAGVNYFLDVEMGRTTCTKSQTNLTDC 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KGSNDAYHSRAIQVVRARKQLVAGVNYFLDVEMGRTTCTKSQTNLTDC 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Werner, Sabine
Halle, Jorn-Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Regenbogen, Johannes
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ilarity 41.7%;
Conservative 11
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41.7%;
                                                                                                                                                                    Production and use of
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                                                                                                                                                                                                                                                                                                                                                                                                                                           11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 97; DB 4; Lc. Pred. No. 2.5e-06; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 97; DB 4; Length 140; Pred. No. 2.5e-06;
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Query Match
Best Local Similarity
Whitehes 19; Conserve
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US-08-832-535-11
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-775-932-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5432264-4
CURRENT APPLICATION NUMBER: US/08/832,535

FILING DATE: 03-APR-1997

CLASSIFICATION: 435

ATTORNEY/ACTION: 435
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/929,290
FILING DATE: 13-AUG-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5432264
, APPLICANT: GRUBB, ANDERS;LUNDWALL, AKE;ABRAHAMSON, MAGNUS;
;DALBOGE, HENRIK
, TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11, App.
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SEQ ID NO 2
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Best Local Similarity
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                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                          STREET: PALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 20-MAY-1988
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                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36 KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36 KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC 46
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                                                                                                                                                                                                                                                                                                        INVENTION: HUMAN CYSTATIN
                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08832535
                                                                                                                                                                                                                                                                                                                        NI, JIAN
LI, HAODONG
YU, GUO-LIANG
GENTZ, REINER I
                                                                                                                                                                                                                                          3: HUMAN GENOME SCIENCES, INC.
9410 KEY WEST AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33.3%; Score 96; DB 6; ilarity 39.6%; Pred. No. 2.8e-06; Conservative 10; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33.3%; Score 96; DB 4; Length 120; 39.6%; Pred. No. 2.8e-06;
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RESULT 13
US-08-791-522-3
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TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-832-535-11
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US-08-791-522-3
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APPLICATION DATA:
APPLICATION VIMBER:
FILING DATE: Filed Herewith
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
FILING DATE:
FILING DATE:
APPLICATION NUMBER:
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APPLICANT: Bandman, Olga
APPLICANT: Goll, Surya K
TITLE OF INVENTION: NOVE:
TITLE OF INVENTION: PROT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                       ATTORNEY AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415.855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (201) 994-1744
INFORMATION FOR SEQ ID NO:
                                                                                                                                                          TELEFAX: 415-845-4166
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Wind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 34,610
REFERENCE/DOCKET NUMBER: PF.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 994-1700
                                                 IMMEDIATE SOURCE:
                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 146 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 4
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LENGTH: 145 amino acid
 LIBRARY: GELLIBRARY: 181387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: US
ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 3174 Por
CITY: Palo Alto
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les 19; Conserv
                                                                                   STRANDEDNESS:
                                                                     TOPOLOGY:
                                                                                                     TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B: Incyte Pharmaceuticals, Inc.
3174 Porter Drive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bandman, Olga
                                  GenBank
                                                                     linear
                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOVEL HUMAN CYSTATIN-LIKE PROTEIN
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Best Local Similarity

33.3%;

Score 96; DB 2; Pred. No. 3.6e-06;

Length 146;

Query Match

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RESULT 15
US-09-019-485-4
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US-08-744-138-3
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                                                                                                                                                                                                                                                             Sequence 4, Application US/09019485
Patent No. 6066617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/08744138 Patent No. 6011012
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                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Li, Ha
APPLICANT: Yu, Gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 301 309 8512
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 146 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION: APPLICANT: Gentz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGINAL SOURCE: Cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: protein HYPOTHETICAL: NO
APPLICANT: Ni, Jian
APPLICANT: Ni, Jian
TITLE OF INVENTION: Cystatin
TOTAL OF OPPORTUNITY OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
TELEPHONE: 301 309 8504
TELEPAX: 301 309 8512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: BROOKES, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
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TITLE OF INVENTION: Human Cystatin
NUMBER OF SEQUENCES: 13
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mes 19; Conserv
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/744,138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 146 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
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                                                                                                             Li, Haodong
Yu, Guo-Liang
Gentz, Reiner
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Rosen, Craig A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33.3%; Score 96; DB 3; 39.6%; Pred. No. 3.6e-06; tive 10; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>.</u>.
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-019-485-4
                                                      Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                     TELEFAX: 3013098439 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
NAME: Benson, Robert H.
REGISTRATION NUMBER: 30,446
REFERENCE/DOCKET NUMBER: PP26
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER: OCDERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 146 amino acid
                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
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COUNTRY: L.
20850
                                                                                                                                                                                STRANDEDNESS:
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CITY: Rockville
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                   TELEPHONE:
62 KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC 109
                          1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC
                                                                                                                                                                                                 amino acid
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9410 Key West Avenue
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                                                                  Conservative
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                                                              33.3%; Score 96; DB 3; LE
39.6%; Pred. No. 3.6e-06;
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Search completed: March 23, 2004, 17:15:30 Job time : 12.5314 secs

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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd. 4.

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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                         Score
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seq length: 2000000000
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Match
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/cgn2_6/ptodata/1/pubpaa/US06_NEW PUB.pep:*

/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

/cgn2_6/ptodata/1/pubpaa/US07_NEW PUB.pep:*

/cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*

/cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*

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/ Cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
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US-09-941-314-31

US-09-941-314-3

US-09-941-314-2

US-09-941-314-10

US-09-941-314-13

US-09-941-314-13

US-09-941-314-13

US-09-941-314-12

US-09-941-314-17

US-09-941-314-17

US-09-941-314-17

US-09-941-314-17

US-09-941-314-17

US-09-941-314-17

US-09-941-314-17

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Sequence 4, Appli
Sequence 2, Appli
Sequence 10, Appl
Sequence 13, Appl
Sequence 16, Appl
Sequence 17, Appli
Sequence 11, Appli
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Sequence 15, App
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8, App
19, App
34822,
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US-09-775-932-14 US-09-775-932-10	-849-303-	497-	US-08-849-303-24	US-09-775-932-8	US-10-235-148-5	US-10-006-467-5	US-09-740-638-5	US-08-849-303-26	US-09-969-834-4	US-08-849-303-15	US-09-775-932-16	US-09-775-932-24	US-08-849-303-16	US-08-849-303-18	US-10-264-049-2608	US-10-376-564-47	US-10-329-428-3	US-09-969-834-3	US-09-940-497-3	US-08-849-303-17	US-09-775-932-2	US-10-168-425-14	US-10-376-564-48	US-10-376-564-46		US-10-006-467-2	US-09-740-638-2	US-09-864-761-48936
Sequence 14, Appl Sequence 10, Appl	25,	Sequence 6, Appli	24,	, ,	<u>ა</u>	Sequence 5, Appli	Sequence 5, Appli	26,	4 , A	15,	16,	24,	Sequence 16, Appl	18, App	2600	47,	Sequence 3, Appli	u '	ω	Sequence 17, Appl	Sequence 2, Appli	14,	48,	46,	<u>ب</u>	Sequence 2, Appli	2, 7	Sequence 48936, A

ALIGNMENTS

RESULT 1 US-09-941-314-14

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Sequence 14, Application US/09941314

Patent No. US20020142396A1

GENERAL IMPORMATION:

APPLICANT: ZymoGenetics, Inc.

TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-61PC

CURRENT PILLING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230, 230

PRIOR PILING DATE: 2001-09-01

NUMBER OF SED ID NOS: 19

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 14

SEQ ID NO 14

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APPLICATION: MARCH

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FILE REFERENCE: 00-81PC

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RESULT 4
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US-09-941-314-15
US-09-941-314-4
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                                                                                                                                                                                                                                                                    Sequence 4, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
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APPLICANT: ZymoGenetics, Inc.
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                          SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 4
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LENGTH: 80
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Best Local S
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Patent No. US20020142396A1
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                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 115
TYPE: PRT
ORGANISM: Homo sapiens
                    ORGANISM: Homo sapiens
                                                 TYPE: PRT
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                                                                        LENGTH: 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 288; DB 9; 100.0%; Pred. No. 4.3e-30; tive 0; Mismatches 0;
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RESULT 7
US-09-941-314-13
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-10
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; ORGANISM: Homo sapiens
US-09-941-314-2
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ.ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ.ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
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Tocal Similarity
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its
TITLE OF INVENTION: Inhibit Cancer Procoagulant
FILE REFERENCE: 00-81PC
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                Local Similarity
nes 45; Conserv
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                                                                           KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN
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100.0%; Pred. No. 5.3e-30;
tive 0; Mismatches 0;
                                                                                                                                                                   86.1%; Score 248; DB 9; 100.0%; Pred. No. 2.8e-25;
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Pred. No. 4.4e-30;
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Sequence 13, Application US/09941314 Patent No. US20020142396A1

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APPLICANT: ZymoGenetics, Inc.

ITITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER 60/230,230
PRIOR FILING DATE: 2001-09-01
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 13
LENGTH: 49
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US-09-941-314-12
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; ORGANISM: Homo sapiens
US-09-941-314-16
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US-09-941-314-13
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 16, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
                                                                                                                                                                                                                                                        Sequence 12, Application US/09941314 Patent No. US20020142396A1 GENERAL INFORMATION:
SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 12 LENGTH: 33
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Best Local Similarity
                                                       APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Proteir
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR PILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
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45; Conservative
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100.0%; Pred. No. 4.8e-18;
tive 0; Mismatches 0;
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100.0%; Pred. No. 3e-25;
tive 0; Mismatches
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| Sequence 11, Application US/09941314 |
| Patent NO. US20020142396A1 |
| GENERAL INFORMATION: |
| APPLICANT: ZymoGenetics, Inc. |
| TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to |
| TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein |
| FILE REFERENCE: 00-91PC |
| CURRENT APPLICATION NUMBER: US/09/941,314 |
| CURRENT FILING DATE: 2001-08-29 |
| PRIOR APPLICATION NUMBER: 60/330,230 |
| PRIOR FILING DATE: 2001-09-01 |
| NUMBER OF SEQ ID NOS: 19 |
| SOFWMARE: FastSEQ for Windows Version 4.0 |
| SSEQ ID NO 11 |
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US-09-941-314-11
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US-09-941-314-17
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Best Local Similarity
Matches 33; Conserv
                                                                Query Match
Best Local Similarity
Matches 23; Conserv
                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 48
                                                                                                                                                                                                                                                                                                                                                          Sequence 17, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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                                                                                                                                                                                                                                                                   FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 24
TYPE: PRT
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ORGANISM: Homo sapiens
                                                                                                                                                                                TYPE: PRT
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                      30 NVEMQWTTCQKPETTNCVPQERE 52
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1 NVEMOWTTCQKPETTNCVPQERE 23
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                                                                     Conservative
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                                                                 100.0%; PI
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100.0%; Pr/
                                                                   Score 189; DB 9; Pred. No. 1.1e-17;
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Sequence 9, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Inhibit Cancer Procoagulant Pro
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                US-08-849-303-19
Sequence 19, Application US/08849303; Publication No. US20030221209A1; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Proteir
FILE REFERENCE: 00-81PC
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CURRENT FILING DATE: 2001-08-29
FRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
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TYPE: PRT
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                               TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
                   ADDRESSEE:
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Similarity 100.0%; I
23; Conservative 0;
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                                                                                                             Atkinson, Howard J. McPherson, Michael J.
                                                                                           Urwin, Peter E
411 Hackensack Avenue, 4th Floor
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                   Klauber & Jackson
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; Pred. No. 1.5e-08;
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CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR PELING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-08-03
PRIOR PILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: US 60/23,366
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR PILING DATE: 2000-09-27
PRIOR PILING DATE: 2001-01-30
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US-09-864-761-34822
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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LENGTH: 127 amino acids
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ATTORNEY/AGENT INFORMATION:
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REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
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Hanzel, David K.
Chen, Wensheng
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PRIOR FILING DATE: 2001-01-30

PRIOR APPLICATION NUMBER: PCT/US01/00668

PRIOR APPLICATION NUMBER: PCT/US01/00663

PRIOR FILING DATE: 2001-01-30

PRIOR APPLICATION NUMBER: PCT/US01/00662

PRIOR APPLICATION NUMBER: PCT/US01/00662

PRIOR APPLICATION NUMBER: PCT/US01/00662

PRIOR APPLICATION NUMBER: PCT/US01/00661

PRIOR APPLICATION NUMBER: PCT/US01/006670

PRIOR PILING DATE: 2001-01-30

PRIOR APPLICATION NUMBER: US 09/608,408

PRIOR PILING DATE: 2001-01-29

NUMBER OF SEQ ID NOS: 49117

SOPTWARE: Annomax Sequence Listing Engine vers. 1.1

SEQ ID NO 34822

TYPE: PRT

OCHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.5

OCHER INFORMATION: EXPRESSED IN LING, SIGNAL = 1.5

OCHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5

OCHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.5

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Search completed: March 23, 2004, 17:17:52
Job time : 29.0669 secs
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Match
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T31871
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19.1	19.1	19.3	19.3	19.3	19.3	19.4	19.4	19.4	19.4	19.8	19.8	19.8	20.0	20.1	20.1
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KGHUL1	T04401	A35564	S39782	869198	T31026	RDNTNS	RDNTNT	A99717	C95252	KGBOH2	S19254	KGBOL2	T19121	KGBOH1	JN0118
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C;Accession: S10587

R;Esnard, F.; Esnard, A.; Faucher, D.; Capony, J.P.; Derancourt, J.; Brillard, M.; Gauth Biol. Chem. Hoppe-Seyler 371 (Suppl.), 161-166, 1990

A;Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosylar A;Reference number: S10587; MUID:90380276; PMID:2400577

A;Accession: S10587
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S10587
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A;Title: The CRES gene: a unique testis-regulated gene related A;Reference number: A45361; MUID:93078799; PMID:1280328
A;Accession: A45361
                                                                                                A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-120 <ESN>
A;Note: 43-Asn was also found
A;Note: the sequence from Fig. 2 is incons: C;Superfamily: cystatin; cystatin homology F;9-120/Domain: cystatin homology <CYS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cystatin-related epididymal specific protein - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999
C;Accession: A45361
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A;Note: Bequence extracted from NCBI backbone (NCBIP:118813)
C;Superfamily: cystatin; cystatin homology
F;28-139/Domain: cystatin homology <CYS>
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                                                                                                                                                                                                                                                                                                                                                                                                                                   ;Species: Rattus sp. (rat)
;Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
Query Match
Best Local Similarity
Matches 21; Conserv
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41.5%; Pred. No. 2.6e-09;
vative 16; Mismatches 13; Indels
                        36.8%;
                                                                                                                                                     2 is inconsistent with that from
  Score 106; DB 2; I
Pred. No. 3.2e-06;
1; Mismatches 14;
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                                             Length 120;
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1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC 46

11; Mismatches

Indels

2

Gaps

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C;Species: Homo sapiens (man)
C;Date: 06-Uil-1982 #sequence revision 31-Mar-1991 #text change 08-Dec-2000
C;Accession: S10216; S00004; JL0095; A33400; S02751; A01270; A25434; S12288; A32732; A60
C;Accession: M.; Olafsson, I.; Palsdottir, A.; Ulvsbaeck, M.; Lundwall, A.; Jensson, O.
Blochem. J. 268, 287-294, 1990
A;Title: Structure and expression of the human cystatin C gene.
A;Reference number: S10216; MUID:90303202; PMID:2363674
A;Accession: S10216
A;Molecule type: DNA
A;Residues: 1-146 <AB1>
A;Cross-references: EMBL:X52255; NID:g30257; PIDN:CAA36497.1; PID:g296643
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C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #text_change 16-Jul-1999
C;Accession: S07085; S01337; S21109
C;Accession: S07085; S01337; S21109
R;Cole, T.; Dickson, P.W.; Esnard, F.; Averill, S.; Risbridger, G.P.; Gauth
Eur. J. Biochem. 186, 33-42, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: protein
A;Residues: 8,'XX',11-20 <ES2>
C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor
F;16-127/Domain: cystatin homology <CYS>
F;80-90,104-124/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein
A; Residues: 8-49 < ESN'>
R; Esnard, A.; Esnard, F.; Guillou, F.; Gauthier, F.
FEBS Lett. 300, 131-135, 1992
A; Title: Production of the cysteine proteinase inhibitor
A; Reference number: S21109; MUID:92225121; PMID:1563513
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A;Accession: S07085
A;Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738 R;Levy, E.; Lopez-Otin, C.; Ghiso, J.; Geltner, D.; Frangione, B. J. Exp. Med. 169, 1771-1778, 1989
A;Title: Stroke in Icelandic patients with hereditary amyloid angiopathy
                                                                                                                                                                                                                           A; Title: Molecular cloning and sequence analysis of cDNA coding A; Reference number: S00004; MUID:87219149; PMID:3495457
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                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-146 < AB2>
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A; Residues: 1-127 < COL>
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Abrahamson, M.; Grubb, A.; Olafsson, I.; Lundwall, A.
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43.8%;
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Pred. No. 3.4e-06;
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                                                               R;Grubb,
                                                                                             A;Experimental source: urine, kidney disease A;Note: truncated forms with amino ends at p
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Lett.

disulphide bridges of human cystatin

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(gamma-trace)

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cystatin.

H.; Barrett, A.J. 74, 1984

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of the precursor were

A.; Lofberg, H. t. 170, 370-374,

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A;Molecule type: protein
A;Residues: 27-49,'XX', 52-64 <OLA>
A;Residues: 27-49,'XX', 52-64 from cerebro:
A;Note: this protein, purified from cSF but
e defective gene is not present in CSF but
g;Popovic, T.; Brrin, J.; Ritonja, A.; Turk,
Biol. Chem. Hoppe-Seyler 371, 575-580, 1990
A;Title: Different forms of human cystatin
                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: protein
A;Residues: 27-76 <BRZ>
R;Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensson, O
Scand. J. Clin. Lab. Invest. 50, 85-93, 1990
A;Title: The amino terminal portion of cerebrospinal fluid o
A;Reference number: A60552; MUID:90193615; PMID:2315647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 27-73 <TUR>
R;Brzin, J.; Popovic, T.; Turk, V.
Biochem. Biophys. Res. Commun. 118, 103-109, 1984
A;Title: Human cystatin, a new protein inhibitor of cysteine proteinases.
A;Reference number: A32732; MUID:84128015; PMID:6365094
A;Accession: A32732
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A;Residues: 1-24,'T', 26-146 <SAI>
A;Residues: 1-24,'T', 26-146 <SAI>
A;Residues: 1-24,'T', 26-146 <SAI>
A;Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:g181385; PIDN:AAA52164.1; PID:g1
R;Gh1so, J.; Cowan, N.; Frangione, B.
Biol. Chem. Hoppe-Seyler 369, 205-208, 1988
Biol. Chem. Hoppe-Seyler 369, 205-208, 1988
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A;Residues: 37-93,'Q',95-146 <GHI>
R;Residues: 37-93,'Q',95-146 <GHI>
R;Turk, V, Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, l
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
H;Title: Protein inhibitors of cysteine proteinases. III.
A;Reference number: S01461; MUID:84110059; PMID:6662498
A;Accession: S12288
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Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982
A;Title: Human gamma-trace, a basic microprotein: amino
A;Reference number: A01270; MUID:82222268; PMID:6283552
A;Accession: A01270
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A;Residues: 27-131'S',133-146 <GRU>
A;Residues: 27-131'S',133-146 <GRU>
R;Ghiso, J.; Jensson, O.; Frangione, B.
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
A;Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland A;Reference number: A25434; MUID:86206076; PMID:3517880
A;Accession: A25434
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A; Residues: 1-140
                                                                                          A; Reference number: $10607; MUID: 91025625; PMID: 2222856
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A; Residues: 82-119 <GH2>
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A;Note: the cystatin C gene isolated from the brain of an Icelandic pati
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A;Molecule type: protein
A;Residues: 27-53 <POP>
                                                        A; Accession: S10607
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                                                                                                                                                                                 ified from cerebrospinal fluid of patients with the autosomal resent in CSF but is found instead in amyloid deposits Ritonja, A.; Turk, V.
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A;Status; preliminary
A;Molecule type: protein
A;Residues: 27-49;106-146 <BER>
A;Residues: 27-49;106-146 <BER>
C;Comment: This protein is found in the post-gamma-globulin fraction of cerebrospinal f patients with certain autoimmune diseases.
C;Comment: This protein is an inhibitor of cysteine proteinases and may serve an impo;
C;Comment: This protein is an inhibitor of cysteine proteinases and may serve an impo;
C;Comment: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral hermo;
C;Genetics:
A;Genetics:
A;Genetics:
C;Superion: 20p11.2-20p11.2
A;Introns: 81/3; 119/3
C;Superion: 20p11.2-20p11.2
A;Introns: 81/3; 119/3
C;Superion: signal sequence #status predicted <SIG>
F;1-26/Domain: signal sequence #status predicted <SIG>
F;35-146/Domain: cystatin homology <CYS
F:35-146/Domain: cystatin homology <CYS
F:35-146/Domain: cystatin homology <CYS
F:35-146/Domain: cystatin homology <CYS
N;Alternate names: thiol proteinase inhibitor C;Species: Boe primigenius taurus (cattle) C;Date: 28-Feb-1986 #sequence_revision 28-Feb-C;Accession: A01271 R;Hirado, M.; Tsunasswa, 8.; Sakiyama, F.; Nij
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C;Superfamily: cystatin; cystatin homology
F;29-140/Domain: cystatin homology <CYS>
F;93-103,117-137/Disulfide bonds: #status predicted
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A; Residues: 1-140 < SOL>
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Biochem. Biophys. Res. Commun. 172, 945-951, 1990
A;Title: Transforming growth factor beta regulates cystatin
A;Reference number: A36163; MUID:91054522; PMID:2241983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Mus musculus (house mouse)
C;Date: 14-Dec-1990 #sequence_revision 14-Dec-1990
C;Accession: A36163
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A; Contents: annotation; dis
R; Berti, P.J.; Storer, A.C.
Biochem. J. 302, 411-416, 1
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F;29/Modified site: hydroxyproline (Pro) (partial) #status experimental
F;99-109,123-143/Disulfide bonds: #status experimental
                                                                                                                                     cystatin - bovine
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Best Local S
Matches 19
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Best Local S
Matches 19
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  S.; Sakiyama, F.; Niinobe,
                                                                                                                                                                                                                                                                                                                                                                     32.3%; Score 93; DB
39.6%; Pred. No. 0.00
tive 11; Mismatches
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R;Laber, B.; Krieglstein, K.; Henschen, A.; Kos, J.; Turk, N
FEBS Lett. 248, 162-168, 1989
A;Title: The cysteine proteinase inhibitor chicken cystatin
A;Reference number: S04008; MUID:89252033; PMID:2721673
A;Accession: S04008
                                                                                                                                                                                                                                                                                                                                                                           R;Grubb, A.; Lofberg, H.; Barrett, A.J.
FEBS Lett. 170, 370-374, 1984
A;Title: The disulphide bridges of human cystatin C (gamma-trace) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein
A; Residues: 24-139 < TUR>
A; Residues: 24-139 < TUR>
R; Anastasi, A.; Brown, M.A.; Kembhavi, A.A.; Nicklin, M.J.H.; Sa
Biochem. J. 211, 129-138, 1983
Biochem. J. 211, 129-138, 1983
A; Title: Cystatin, a protein inhibitor of cysteine proteinases.
A; Title: Cystatin, a protein inhibitor of cysteine proteinases.
A; Reference number: A37514; MUID:83256421; PMID:6409085
A; Contents: annotation; characterization of protein
A; Contents: annotation; characterization of protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. J. 217, 813-817, 1984
A; Title: Cystatin. Amino acid sequence and A; Reference number: A01274; MUID:84178305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Gallus gallus (chicken)
C;Date: 03-Aug-1984 #sequence revision 12-Apr-1996 #text che
C;Date: 03-Aug-1984 #sequence revision 12-Apr-1996 #text che
C;Accession: A34456; A01274; S01461; S48159; S04008; JN0789
R;Colella, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C.
J. Biol. Chem. 264, 17164-17169, 1989
A;Title: Chicken egg white cystatin. Molecular cloning, nucl
A;Reference number: A34456; MUID:90008873; PMID:2793849
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                                                                                                                                                                                                                          Eur. J. Biochem. 224, 407-415, 1994
A;Title: Production, inhibitory activity, folding and cA;Reference number: S48159; MUID:95010016; PMID:7925354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Schwabe, C.; Anastasi, A.; Ci
Biochem. J. 217, 813-817, 1984
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A; Residues: 1-139 < COL>
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                                                                                                                                                                                                                                                                                                 A; Contents: annotation; disulfide bonds R; Auerswald, E.A.; Naegler, D.K.; Schul;
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R;Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A34456
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                                                                                                                                                A;Status: preliminary A;Molecule type: prot
                                                                                                                                                                                                  A; Accession: S48159
                                                                                                                                                                                                                                                                                                                                                     A; Reference number: S01462
                                                                                                                         A;Molecule type: protein
A;Residues: 24-139 <AUE>
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271; MUID:85231205; PMID:3891407
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                                                                                                   Huber,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Improved
                                               phosphoprotein
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                                                                                                                                                                                                                                                                                                                                                                             chicken cystatin
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C;Species: Homo sapiens (man)
C;Date: 31-Mar-1989 #sequence revision 30-Jun-1989 #text_change 16-Jul-1999
C;Accession: B29632; S02490; Ā41422; B27015
R;Saitch, E.; Kim, H.S.; Smithles, O.; Maeda, N.
Gene 61, 329-338, 1987
A;Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis A;Reference number: A91589; MUID:88185836; PMID:3446578
A;Accession: B29632
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A; Residues: 1-139 <CC2>
A; Cross-reference
A;Molecule type: DNA
A;Residues: 1-141 <SAI>
A;Crose-references: GB:M19673;
A;Note: the authors translated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biochem. J. 246, 799-802, 1987
A;Title: Amino acid sequence of a cystatin from venom of the
A;Reference number: A28793; MUID:88076861; PMID:3500714
A;Accession: A28793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Ritonja, A.; Evans, H.J.; Machleidt, W.; Barrett, A.J. Biochem. J. 246, 799-802, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cystatin - puff adder
C;Species: Bitis arietans (puff adder)
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988
C;Accession: A28793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gene 130, 175-181, 1993
A;Title: Isolation and characterization of the chicken cystatin-encoding A;Reference number: JN0789; MUID:93366172; PMID:8359684
A;Accession: JN0789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 97-114 < LAB> R; Colella, R.; Bird, J.W
                                                                                                                                                                                                                                      cystatin SA precursor - human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein A; Residues: 1-111 < RIT>
                                                                                                                                                                                                                                                                            RESULT 9
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Similarity 42.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                     SKNDYYFKERRVVEAQSQVVSGVKYYLMMELLKTTCKKTVGRPKGYQEIQNCNLPPENQ 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RASNDKYSSRVVRVISAKRQLVSGIKYILQVEIGRTTCPK 96
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                                                                                                                                                                                                                                                                                                                                                                                                                                 29.0%; Score 83.5; DB 2 33.9%; Pred. No. 0.0021;
  GB:M19170; NID:g186403; PIDN:AAA36116.1; PID:g386826 the codon GAC for residue 129 as Asn
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                                                                                                                                                                                                                                                                                                                                                                                                               17;
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                                                                                                                   sequence analysis
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KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTC-----QKPETTNC

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A;Residues: 1-162 <LUS>
A;Cross-references: GB.M37105; NID:g159905; PID:g159906
A;Cross-references: GB.M37105; NID:g159905; PID:g159906
A;Note: sequence extracted from NCBI backbone (NCBIN:111962, NCBIP:111963)
A;Chandrashekar, R.; Masood, K.; Alvarez, R.M.; Ogunrinade, A.F.; Lujan, R.; Richards
J. Clin. Invest. 88, 1460-1466, 1991
A;Title: Molecular cloning and characterization of recombinant parasite antigens for A;Reference number: A43927; MUID:92042729; PMID:1840605
A;Accession: B43927
                                                                                                       A;Note: sequence extracted from NCBI backbone C;Superfamily: cystatin; cystatin homology C;Keywords: cysteine proteinase inhibitor
                                                                                                                                                                                           A;Molecule type: mRNA A;Residues: 'P',37-57', A',59-71,'R',73-83,'N',85-126,'M',128-162 A;Crose-references: GB:M60279; NID:9159888 A;Experimental source: clone OC 9.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Onchocerca volvulus
C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 17-Mar-2000
C;Accession: A43428; B43927
R;Lustigman, S; Brotman, B; Huima, T.; Prince, A.M.; McKerrow, J.H.
J. Biol. Chem. 267, 17339-17346, 1992
A;Title: Molecular cloning and characterization of onchocystatin, a cysteine proteinase
A;Reference number: A43428; MUID:92381053; PMID:1512269
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C;Superfamily: cystatin; cystatin homology
F;30-141/Domain: cystatin homology <CYS>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Isemura, S.; Saitch, E.; Sanada, K.
J. Biochem. 102, 693-704, 1987
A;Title: Characterization and amino acid sequence of a new acidic cysteine proteinase in
A;Reference number: A41422; MUID:88139220; PMID:3436950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Saitoh, B.; Isemura, S.; Sanada, K.; Kim, H.S.; Smith Biol. Chem. Hoppe-Seyler 369, 191-39, 1988 A;Title: Cystatin superfamily. Evidence that family II A;Title: Cystatin superfamily. Evidence that family II A;Reference number: S02489; MUID:89076505; PMID:3202964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N;Alternate names: cysteine proteinase inhibitor; C;Species: Onchocerca volvulus
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A;Residues: 25-134,'D',136-141 <IS2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: B27015
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
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Matches
                               Best
                                                 Query Match
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                            Focal
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15;
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                         Similarity
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30.2%; Pr
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Pred. No. 0.00
13; Mismatches
Score 76.5; D
Pred. No. 0.02
L5; Mismatches
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Turk, V., ed., pp.497-505, Walter de Gruyte
proteinase inhibitors in human saliva.
                            024;
                                                                                                                                                                    (NCBIN: 65111, NCBIP: 65113)
                                                   DB 2;
  16;
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A;Title: A cysteine protease inhibitor stored in the large granules of horseshoe crab he A;Reference number: JC4536; MUID:97063312; PMID:8907180

A;Recession: JC4536

A;Recession: JC4536

A;Residues: 1:133 <AGA>
A;Residues: 1:133 <AGA>
A;Residues: 1:133 <AGA>
A;Residues: 1:131 <AGA>
A;Residues: 26-57;60-105;107-113;115-128 <AG2>
A;Residues: 16-57;60-105;107-113;115-128 <AG2>
A;Residues: 26-57;60-105;107-113;115-128 <AG2>
A;Residues: 16-57;60-105;107-113;115-128 <AG2>
A;Residues: 16-57;60-10
                                                                                                                                                                                                                                                                                                                             A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-142 <FRE>
A; Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711
A; Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711
A; Note: single residue difference between this report and S18218 was investigated and sh R; Freije, J.P.; Abrahamson, M.; Olafsson, I.; Velasco, G.; Grubb, A.; Lopez-Otin, C.
J. Biol. Chem. 266, 20538-20543, 1991
A; Title: Structure and expression of the gene encoding cystatin D, a novel human cystein A; Reference number: S18212; MUID:92041895; PMID:1939105
A; Accession: S18212
A; Status: preliminary
A; Molecule type: DNA
A; Cross-references: EMBL:X59964; NID:g30263; PIDN:CAA42590.1; PID:g30264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cystatin D precursor - human
C;Species: Homo sapiens (man)
C;Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 16-Jul-1999
C;Accession: A47142; S18212
C;Accession: A47142; S18212
R;Freije, J.P.; Balbin, M.; Abrahamson, M.; Velasco, G.; Dalboge, H.; Grubb, A.; Lopez-CJ. Biol. Chem. 268, 15737-15744, 1993
A;Title: Human cystatin D. cDNA cloning, characterization of the Escherichia coli expres A;Reference number: A47142; MUID:93340179; PMID:8340398
A;Accession: A47142
A;Gene: GDB:CST5
A;Cross-references: GDB:136380; OMIM:123858
A;Map position: 20p11.21-20p11.21
A;Introns: 77/3; 115/3
C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor;
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N;Alternate names: cystatin L; cysteine proteinase inhibitor
C;Specias: Tachypleus tridentatus
C;Specias: Tachypleus tridentatus
C;Date: 15-Feb-1996 #sequence_revision 19-Apr-1996 #text_change 03-Dec-1999
C;Accession: JC4536; PC4122
R;Agarwala, K.L.; Kawabata, S.; Hirata, M.; Miyagi, M.; Tsunasawa, S.; Iwan, J. Biochem. 119, 85-94, 1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
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A;Map position: 20p11.2-20p11.2
C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-141/Product: cystatin SA-I #status experimental <MAT1>
F;29-141/Product: cystatin SN #status experimental <MAT2>
F;30-141/Domain: cystatin homology <CYS>
F;30-141/Domain: cystatin homology <CYS>
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A;Residues: 29-141 <ISB>
A;Residues: 29-141 <ISB>
A;Residues: 29-141 <ISB>
R;Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine,
R;Ramasubbu, N.; Reddy, M.S.; 1991
Biochem. J. 280, 341-352, 1991
Biochem. J. 280, 341-352, 1991
Biochem. J. 280, 341-352, 1991
A;Title: Large-scale purification and characterization of the major phosphoprotein
A;Reference number: S19279; MUID:92082469; PMID:1747107
A;Recession: S19279
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C;Species: Homo sapiens (man)
C;Date: 28-May-1986 #sequence_re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GDB:119815; OMIM:123855
A;Map position: 20p11.2-20p11.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Comment: Human saliva appears to contain several cysteine proteinase inhibitors ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three membA;Reference number: A91589; MUID:88185836; PMID:3446578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Saitoh,
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A; Residues: 1-141 < ALH>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: GDB: CST1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Residues:
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A; Residues: 1-86, 'I', 88-141 <SAI>
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                                                                                             F;94-104,118-138/Disulfide bonds:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 DKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC 46
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    24.7%;
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    Score
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    71;
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Length 141;
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A;Molecule type: protein
A;Residues: 21-55 < RAM>
R;Polimeson, M.; Richhardson, C.F.; Bergey, E.J.; Levine, M.J.; N. Arch. Oral Biol. 36, 631-636, 1991
A;Title: The effects of human salivary cystatins and statherin
A;Reference number: A56608; MUID:92074898; PMID:1741693
A;Accession: A56608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Contents: annotation; inhibitor specificity
R;Hawke, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.
Blochem. Blophys. Res. Commun. 145, 1248-1253, 1987
A;Title: Identification of a long form of cystatin from human saliva by rapid microbore A;Reference number: A29603; MUID:87270697; PMID:3496880
A;Accession: A29603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein
A; Residues: 21-134', D', 136-141 <IHU>
A; Residues: 21-134', D', 136-141 <IHU>
A; Residues: 21-134', D', 136-141 <IHU>
A; Risemura, S.; Saitoh, E.; Sanada, K.

J. Biochem. 96, 489-498, 1984
A; Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole A; Reference number: A91985; MUID:85054716; PMID:6501254
A; Accession: A01272
A; Molecule type: protein
A; Residues: 29-134', D', 136-141 <ISE>
R; Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.
J. Biochem. 96, 1311-1314, 1994
J. Biochem. 96, 1311-1314, 1994
                                                                                                                                                                   A;Note: sequence extracted from NCBI backbone (NCBIP:67866)
A;Note: authors desigate form without phosphate as cystatin S and form containing one p C;Comment: This protein strongly inhibits papain and ficin, partially inhibits stem bro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 21-51 <ABA/N
A;Residues: 21-51 <ABA/N
R;Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.;
Biochem. J. 280, 341-352, 1991
A;Title: Large-scale purification and characterization of the
A;Reference number: S19279; MUID:92082469; PMID:1747107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: Cystatin S: a cysteine proteinase inhibitor of human saliva A;Reference number: A91981; MUID:85104877; PMID:6394600 A;Contents: annotation; inhibitor specificity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X54667; NID:g30365; PIDN:CAA38478.1; PID:g30366
R;Lamkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.
Arch. Biochem. Blophys. 288, 664-670, 1991
A;Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel pellicle
A;Reference number: S16500; MUID:91378515; PMID:1898055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens (man)
C;Date: 25-Peb-1985 #sequence revision 08-Feb-1996 #text_change 16-Jul-1999
C;Date: 25-Feb-1985 #sequence revision 08-Feb-1996 #text_change 16-Jul-1999
C;Accession: S17667; S16500; A01272; A29803; S19280; A56608
R;Bobek, L.A.; Aguirre, A.; Levine, M.J.
Biochem. J. 278, 627-635, 1991
Biochem. J. 278, 627-635, 1991
A;Title: Human salivary cystatin S. Cloning, sequence analysis, hybridizati
A;Reference number: S17667; MUID:91378918; PMID:1898352
A; Cross-references:
A; Map position: 20p
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A;Status: preliminary
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A;Residues: 1-141 <BOB>
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                                                                          A;Gene: GDB:CST4
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   GDB:136381
L1.2-20p11.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C.F.; Bergey, E.J.; Levine, M.J.; Nancollas,
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9; Mismatches
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Search completed: March 23, 2004, 17:14:30 Job time : 16.5732 secs

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RESULT 15
T23130
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A;Introns: 161/2; 223/2; 309/3; 332/2; 547/3; 603/1; 657/3; 745/2;
C;Superfamily: Caenorhabditis elegans hypothetical protein T28B8.3
                                                                                                                                                                                                                                                                                   A;Molecule type: DNA 7. A;Residues: 1-1779 <MIZ> A;Residues: 1-1779 <MIZ> A;Cross-references: EMBL:281133; PIDN:CAB03445.1; GSPDB:GN00019; CESP:T28B8 A;Experimental source: clone T28B8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, December 1997
A;Reference number: Z19690
A;Accession: T23130
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C;Species: Caenorhabditis elegans
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C;Keywords: cysteine proteinase inhibitor; phosphoprotein;
F;1-20/Domain: signal sequence #status predicted <FIG>
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A;Reference number: Z20029
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A;Cross-references: EMBL:AL021066; PIDN:CAA15925.1; GSPDB:GN00019; CESP:T28B8.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Caenorhabditis elegans
C;Date: 15-Oct_1999 #sequence_revision 15-Oct-1999 #text_change 15-Sep-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Experimental source: clone H31B20
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                                           19 RQVTDHLEYHLN-----VEMQWTTCQKPETTNCVPQ 49
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16; Conserv
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                                                                                                             Similarity
RRITDHLDYIINNLPTLKHPTNVQWIT--DPYTPHCLPK 785
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seq length: 2000000000
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RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
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Pfam; PF00031; Cystatin; 1.
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HSSP; P01038; 1A90
Genew; HGNC:15959; CST11.
                                                                             "Functional annotation of a full-length mouse cDNA Nature 409:685-690(2001).
                                                                                                                                Wynshaw-Boris A.,
Hayashizaki Y.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOUSE
                                                                                                                     MEDLINE=93078799; PubMed=1280328; Cornwall G.A., Orgebin-Crist M.-C., Hann S "The CRES gene: a unique testis-regulated family is highly restricted in its express of the mouse epididymis."; Mol. Endocrinol. 6:1653-1664(1992).
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                                                                                                                                                                                                                                                      Cornwall G.A., Hsia N., Sutton H.G.; "Structure, alternative splicing and chromosomal localization cystatin-related epididymal spermatogenic gene.";
                                                                                                                                                                                                                                                                                           STRAIN=C3H, and CD-1;
MEDLINE=99247899; PubMed=10229662;
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InterPro; IPR000010; Cyi
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                                                                                                                                                                                                    TISSUE=Epididymie;
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                                                                                                            -!- FUNCTION: Performs
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SUBCELULAR LOCATION: Secreted.

SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: Proximal caput region of the epididym expression in the testis. Within the testis it is localized expression for the second whereas within the epididymis it is elongating spermatids, whereas within the epididymis it is exclusively synthesized by the proximal caput epithelium.

INDUCTION: Testicular factors or hormones other than andrease.
                                                                                                maturation.
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P01034; 1G96.
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Rodentia;
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Pred. No. 4
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                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleosto
Sciurognathi; Muridae; Murinae;
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                                                                                                                                                                                                                                                                                                                                                                           Vertebrata; Euteleostomi;
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s localized
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CYSTATIN-RELATED | PROTEIN. SECONDARY AREA OF

CONTACT

(POTENTIAL).

EPIDIDYMAL SPERMATOGENIC

CHAIN SIGNAL

19 142

Signal.
POTENTIAL.

Pfam; PF00031; cystatin; 1 SMART; SM00043; CY; 1. Thiol protease inhibitor;

EMBL; AF090692; AAC36317.1; -. HSSP; P01034; 1G96.

InterPro; IPR000010; Cystatin

or send an email to license@isb-sib.ch).

entities requires a license agreement (See http://www.isb-sib.ch/announce/

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RESULT
CST8_RA
    Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CST8 RAT
O88969;
30-MAY-2000
30-MAY-2000
10-OCT-2003
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CONFLICT
between the Swiss Institute of Bioinfo
the European Bioinformatics Institute
use by non-profit institutions as lo
modified and this statement is not remo
                                                                                                                                                                                                                Cornwall G.A., Hsia N., Sutton H.G.; "Structure, alternative splicing and chromosomal localization cystatin-related epididymal spermatogenic gene."; Biochem. J. 34:85-93(1999).
                                                                                                                                                                                                                                                                                                      STRAIN-Sprague-Dawley; TISSUE-Epididymis; MEDLINE-99247899; PubMed=10229662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a centre of the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute of There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cystatin-related
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                                                                                                                                   SIMILARITY:
                                                                                                                                                                                              FUNCTION: Performs
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SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                              maturation.
                                                                                                                                                     SUBCELLULAR LOCATION:
                                                          SWISS-PROT entry 18 copyright. It is produced through a een the Swiss Institute of Bioinformatics and the EMBI
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MGI:107161; CBt8.
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(Rel. 39, Last sequence update)
(Rel. 42, Last annotation update)
(Rel. 42, Last annotation pro-
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                                                                                                                              Belongs to the cystatin family.
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Pred. No. 9
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PLWLSLILFILP -> GTRNDEQVGESQK (IN REF.
50B446E98F66673E CRC64;
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CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
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                                                   DeLoukas P., Matthews I.H., Abdurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L., Ballons M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L., Ababage A.K., Bagguley C.L., Ballons M., Beard L.M., Beard D.M., Ballons M.R., Brown A.J., Beasley J.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Ababage A.K., Carter N.P., Carder C., Carter N.P., Carder C., Carter N.P., Carden D.M., Clark B.V., Clark S.Y., Clee C.M., Clampman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., An Clampman J.C., Frankland J.A., Fraser A., French L., Garner P., Allington A., G., Frankland J.A., Fraser A., French L., Garner P., Allington A.G., Frankland J.A., Fraser A., French L., Garner P., Allington A.G., Frankland J.A., Fraser A., French L., Garner P., Allington A.G., Frankland J.A., Fraser A., Johnson C.M., Johnson D., Allington S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., Allington M.H., King A., Kinghts A., Laird G.K., Lawlor S., Allington S.A., Milne S.A., Mistry D., Moore M.J.F., Millikin J.C., Nickerson T., Allington S.A., Milne S.A., Mistry D., Moore M.J.F., Millikin J.C., Nickerson T., Allington S.A., Patel R., Pearce T.A.V., Peck A.I., Pilmb S.G., Prathalingam S.R., Plumb R.W., Ramsay H., Sings S. M., Schraft R. Schra
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O60676;
30-MAY-2000
30-MAY-2000
28-FEB-2003
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Rice C.M., Ross M.T., Scott C.E., Skuce C.D., Smith M.L., Soderlund Swann R.M., Sycamore N., Taylor R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Transient appearance of CRES protein caput epididymal sperm maturation."; Mol. Reprod. Dev. 41:37-46(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30.MAY-2000 (Rel. 39, Created)
30.MAY-2000 (Rel. 39, Last sequence update)
28.FEB-2003 (Rel. 41, Last annotation update)
Cystatin-related epididymal spermatogenic pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cornwall G.A., Hann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLMVEMQWTTCQKP--ETTNCVPQE 50
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142 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S.R.;
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  cott C.E., Sehra H.K., Shownkeen R., Sims S.,
Soderlund C., Steward C.A., Sulston J.E.,
, Taylor R., Tee L., Thomas D.W., Thorpe A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13;
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Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       precursor (Cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                          K., Lawlor S.
Lovell J.D.,
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Cystatin C p
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P14841;
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CARBOHYD
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DISULFID
          MEDLINE=90092122; PubMed=2689174; Cole T., Dickson P.W., Esnard F., Gauthier F., Schreiber G.;
                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00031; cystatin;
SMART; SM00043; CY; 1.
Thiol protease inhibitor;
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GO; GO:0004869; F:cysteine pro
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF059244; AAC14707.1; -. EMBL; AL109954; CAB64234.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
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"The D
                                                                                  NCBI_TaxID=10116;
                                                                                                                         Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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HSSP; P01034; 1G96
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                                                 STRAIN=Buffalo;
                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exclusively synthesized by the proximal caput epithelium. SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: Proximal caput region of expression in the testis. Within the testis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: Performs a specialized role during sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    elongating spermatids,
                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ad S.L., Whittaker
_L., Wray P.W., Hub
                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                       KESEDKYVFLVVKTLQAQLQVTNLLEYLIDVEIARSDCRKPLSTNEICAIQE
structure and expression analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tromans A.C., Vaudin M., Wall M., Wallis J.M., S.L., Whittaker P., Willey D.L., Williams L., Williams , Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Bec
                                                                                                            Metazoa;
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llarity 48.1%;
Conservative 1
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>recursor (Fragment).
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                                                                                                                                                                                                               STANDARD;
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Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protease inhibitor
                                                                                                                                                                                                                                                                                                                        Pred. No. 5.86
1; Mismatches
                                                                                                                                                                                                                                                                                                                                     Score 117; DB 1;
Pred. No. 5.8e-08;
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N-LINKED (GLCNAC...)
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CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
                                                                                                                                                                                                                                                                                                                                                                            /FTId=VAR_014527.
9A3512757E0F4ECD CRC64;
                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Polymorphism
                        Averill
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                       '<sup>ዝ</sup>
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                       Risbridger
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genes for
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PIR; S10587; S10587.
HSSP; P01034; 1G96.
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                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=92225121; PubMed=1563513;
Esnard A., Esnard F., Guillou F., Gauthier F.;
"Production of the cysteine proteinase inhibitor cystatin C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Esnard A., Esnard F., Faucher D., Gauthier "Two rat homologues of human cystatin C."; FEBS Lett. 236:475-478(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 8-49.
MEDLINE=88313020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brillard M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Esnard F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 8-127.
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in rat brain.";
                                                                                                                                                                                                      DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 8-20
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                                                                                                                                                                                                                                                                                              PROSITE; PS00287;
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                                                                                                                                                                                                                                                                                                                              [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: As an inhibitor of cysteine proteinases, this protein thought to serve an important physiological role as a local regulator of this enzyme activity. Known to inhibits cathepsin I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H, and L. SIMILARITY: Belongs to the cystatin family.
                                 SAISC
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                                                                                                                                     21;
                                                                                                                                               Similarity
                                                                                     KGSNDAYHSRAIQVVRARKQLVAGINYYLDVEMGRTTCTKSQTNLTNC
                                                                                                              KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC
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snard A., Faucher D.,
Gauthier F.;
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                   inhibitor;
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                                   STANDARD;
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Pred. No. 1.3e-06;
1; Mismatches 14
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                                   146
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(See http://www.isb-sib.ch/announce/
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DISULFID
                                                                                    STRAIN-Japanese white; TISSUE-Bone; MEDLINE-98424349; PubMed-9753427; Kobori M., Ikeda Y., Nara H., Kato M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and formatically as the statement is not removed.
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"Cystatin C. Icelandic-like mutation cerebrovascular beta-amyloidosis.";
Stroke 27:2080-2085(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saimiri sciureus (Common squi)
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
"Large scale isolation of osteoclast-specific genes method involving the preparation of a subtracted cDN Genes Cells 3:459-475(1998).
                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                 Oryctolagus cuniculus (Rabbit).
                                                                                                                                                                                                                                                                                                          28-FEB-2003
Cystatin C |
                                                                                                                                                                                                                                                                                                                                                                                                                                            RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U52028; AAB64051.1; -. HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement

    -!- SIMILARITY: Belongs to the cystatin family.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-FEB-2003 (Rel. 41, Last annotation update)
Cystatin C precursor.
                                                                      Kawashima H.;
                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                               NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=97054523; PubMed=8898820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nterPro; IPR000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thought to serve an important phy regulator of this enzyme activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: As an inhibitor of cysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KASNDMYHSRALQVVRARKQIVAGVNYFLDVEMGRTTCTKNQPNLDNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS00287;
                                                                                                                                                                                                                                                                                                          precursor.
                                                                                                                                                                                                                                                                                                                            (Rel. 40, Created)
(Rel. 40, Last seq
(Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
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37
85
                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Eu Lagomorpha; Leporidae; Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cystatin.
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data; Craniata; Vertebrata; Euteleostomi;
ates; Platyrrhini; Cebidae; Cebinae; Saimiri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloid;
                                                                                                                                                                                                                                                                                                                                 annotation
                                                                                                                                                                                                                                                                                                                                                      sequence update)
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CYSTATIN C.

REACTIVE SITE.

SECONDARY AREA OF CO
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08196353C0306AA3
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9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 99;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             physiological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal
                                                                                                                                                                                                                                                                                                                                                                                                                        148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; 1.2e-05; 17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                 update)
                                                                                        Kumegawa
                                                                                                                                                                                                                                                                                                                                                                                                                        ₿
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 146;
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                         nes by an improved cDNA library.";
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                                                                                        Nojima
                                                                                                                                                                                                                                             Euteleostomi;
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RESULT
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01-MAY-1991
01-FEB-1996
10-OCT-2003
                                             STRAIN=ILS, and ISS;
MEDLINE=21363810; PubMed=11471062;
Ehringer M.A., Thompson J., Conroy
Ehringer M., Gordon L., Bennett B.,
Beeson M., Gordon L., Bennet identifi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACT SITE
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-BALB/C; TISSUE-Brain;
STRAIN-B91054522; PubMed=2241983;
Solem M., Rawson C., Lindburg K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thiol
                                                                                                                                                                                    "Structural organization, mouse cystatin-C-encoding Gene 152:221-226(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AB009342; BAA75921.1; -. HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (S or send an email to license@isb-sib.ch).
"High-throughput sequence identification of gene coding variants within alcohol-related QTLs.";
Mamm. Genome 12:657-663(2001).
                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                 Huh C., Nagle J.W., Kozak C.A., Abrahamson M.,
                                                                                                                                                                                                                                                                                             STRAIN=129/Sv; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                          Biochem.
                                                                                                                                                                                                                                                                                                                                                                             Solem M., Rawson C., Lindburg K., Barnes D.; "Transforming growth factor beta regulates cystatin mouse embryo (SFME) cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cystatin C
                                                                                                                                                                                                                                                                       MEDLINE=95137392; PubMed=7835704;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: This is a thiol proteinase inhibitor. SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
19; Conserv
                                                                                                                                                                                                                                                                                                                                                          Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KGSNDRYHSRALQVVRARRQIVSGVKYYLDVLIGRTTCTKTQTNLANC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148
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101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Rel. 18, Created)
(Rel. 33, Last sequence up
(Rel. 42, Last annotation
precursor (Cystatin 3).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Mouse)
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                                                                                                                                                                                                                                                                                                                                                       Res.
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Rodentia;
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                                                                                                                                                                                                        expression and gene (Cst3).";
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REACTIVE SITE.
SECONDARY AREA
BY SIMILARITY.
BY SIMILARITY.
                                                                            Conroy O.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1523C831169E5B9A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                 y O., Xu Y., Ya
Johnson T.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
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                                                                                                                                                                                                                              chromosomal mapping
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                                                               Yang F.,
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                                                                                                                                                                                                                                                     Karlsson
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                                                                                  Canniff J.,
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coutstation -
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RESULT 10
CYTC HUMAN
ID CYTC HUMAN STANDARD;
AC P01034;
DT 21-JUL-1986 (Rel. 01, Created)
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RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Distchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
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RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
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RA Clegs S., Cobley V.E., Collier R.E., Connor R.D., Dunn M.,
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RA Milne S.A., Matrin S.L., McConnachie L.J., McLay K., McMurray A.A.,
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RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
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Saitoh E., Sabatini L.
Isemura S., Sanada K.;
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Abrahamson M., Olafason I., Paladottir
Jensson O., Grubb A.;
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10-OCT-2003 (Rel. 42, Last annotation update)
Cystatin C precursor (Neuroendocrine basic po
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A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altechul S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K.,

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                                                                                                                                                                                                                                                                                                                                  protein,
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CARREDOS
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019092; 15-JUL-1998 15-JUL-1998 28-FEB-2003

(Rel. 36, Created) (Rel. 36, Last seq (Rel. 41, Last ann

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CYTC

MACMU

STANDARD;

146

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Cystatin C

Macaca mulatta (Rhesus macaque) Eukaryota; Metazoa; Chordata; C Mammalia; Eutheria; Primates; C

Craniata; Vertebrata; Euteleostomi; Catarrhini; Cercopithecidae;

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RESULT 11
CYTC_MACMU
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                                                                                               Matches
                                                                                                                    Query Match
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EMBL;
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EMBL;
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                                                                                                                                             DISULFID
                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>:</del>
                                                                                                                                                          DISULFID
                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                       Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                               PDB; 1G96; 06-APR-01.
Genew; HGNC:2475; CST3.
                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                             PROSITE; PS00287;
                                                                                                                                                                                                                                                                                                                                        PIR; S10216;
                                                                                                                                                                                                                                Thiol
                                                                                                                                                                                                                                                                               nterPro; IPR000010; Cystatin
                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: As an inhibitor of cysteine proteinases, this protein thought to serve an important physiological role as a local regulator of this enzyme activity.

SUBUNIT: Homodimer.

TISSUE SPECIFICITY: Expressed in highest levels in the epididymi vas deferens, brain, thymus, and ovary and the lowest in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hemorrhage with amyloidosis (HCHWA) [MIM:105150]; also known as cerebral amyloid angiopathy (CAA) or cerebroarterial amyloidosis Icelandic type. HCHWA is characterized by a thickening of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vas deferens, brain, thymus, submandibular gland.
DISEASE: Defects in CST3 are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cerebral arteries walls with deposition of characteristics of amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                            X52255; CAA36497.1;

M27889; AAA55164.1;

M27889; AAA55164.1;

M27890; AAA55164.1;

X61681; CAA3856.2;
                                                                                                                                                                                                                               protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                      BC013083;
                                                                                                                                                                                                                                                                                                                                                                           AF319564;
                                                                                                                                                                                                                                                                                                                                                                                       X61682; CAA43856.2;
X61683; CAA43856.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X05607; CAA29096.1;
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                                                                                                          Similarity
                                                                       KESDDKYHFRI FRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC
                                               KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC
                                                                                               Conservative
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                                                                                                                                                                                                                                                                                                                                                      AAH13083.1; -.
                                                                                                                                                                                                                                             CYSTATIN; 1
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                                                                                                                                                                                                                               Amyloid;
                                                                                               10;
                                                                                            Score 96; DB
Pred. No. 2.9e
10; Mismatches
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REACTIVE S
SECONDARY
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                                                                                                                                                                                                                               Signal; Disease
                                                                                                                                                                    SITE.
Y AREA
                                                                                                         DB 1;
. 2.9e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           e of hereditary [MIM:105150]; a
                                                                                                                                                                     Q.
                                                                                                                    Length 146
                                                                                                                                                                     CONTACT
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in the
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Best Local S
Matches 19
                                                                                                                                                                                                                             DISULFID
DISULFID
SEQUENCE
                                                           Olsson S.-L., Ek B., Wilm M., Broberg S., Rask L., Bjoerk I.;
"Molecular cloning and N-terminal analysis of bovine cystatin
identification of a full-length N-terminal region.";
Biochim. Biophys. Acta 1343:203-210(1997).
                                                                                                         SEQUENCE FROM N.A., SEQUENCE OF 6
TISSUE=Cerebrospinal fluid, and C
MEDLINE=98094199; PubMed=9434110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercia
                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U51912; AAB64050.1; -. HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cerebrovascular beta-amyloidosis.";
Stroke 27:2080-2085(1996).
             MEDLINE=85231205; PubMed=3891407;
Hirado M., Tsunasawa S., Sakiyama
                                                                                                                                                                                                            Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wei L.H., Walker L.C., Levy E.; "Cystatin C. Icelandic-like mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                       SEQUENCE OF 37-148.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9544;
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  'Complete amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     send
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thought to serve an important
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: As an inhibitor of cysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                regulator of this enzyme activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; PF00031; cystatin; 1.
F; SM00043; CY; 1.
ITE; PS00287; CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                              1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                        Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                         KASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNC
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  Tsunasawa
amino acid
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                                                                                                                       E OF 66-83, AND CHARACTERIZATION and Choroid plexus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               myloid; signal.
BY SIMILARITY.
CYSTATIN C.
REACTIVE SITE.
SECONDARY AREA OF C.
BY SIMILARITY.
BY SIMILARITY.
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0; Mismatches
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Pred. No. 2
  of bovine
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proteinase inhibitor)
             Niinobe
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2.9e-05;
 colostrum
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             Pujii
 low-Mr cysteine
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"Protein inhibitors of cysteine of cystatin from chicken egg whi Hoppe-Seyler's Z. Physiol. Chem.
                                                                                                                                                                                                                                                               MEDLINE=84178305; PubMed=6712597; Schwabe C., Anastasi A., Crow H., "Cystatin. Amino acid sequence and Biochem. J. 217:813-817(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE=90008873; PubMed=2793849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (Chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin precursor (Egg-white cystatin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-1989
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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FEBS Lett. 186:41-45(19
                                                                                                                              MEDLINE=84110059; PubMed=6662498;
Turk V., Brzin J., Longer M., Rit
                                                                                                                                                                                                    SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 24-139.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Colella R., Sakaguchi Y., Nagase H., Bird J.W.C.; "Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue distribution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUL-1986
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Biol. Chem.
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(Rel. 12, Last sequence update)
(Rel. 41, Last annotation update)
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      egg white.
l. Chem. 36
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PYRROLIDONE CA
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Pred. No.
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                                                                                                                              Ritonja A.,
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                                                                                                                                 3
                                                                     Amino-acid sequence
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                                                                                                                                    Borchart
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Auerswald E.A., Jeanicke R., Ogchkinat H.;
"The structures of native phosphorylated chicken cystatin and of a
recombinant unphosphorylated variant in solution.";
J. Mol. Biol. 234:1048-1059(1993).

-I. FUNCTION: This protein binds tightly to and inhibits a variety
thiol proteases including ficin, papain, and cathepsins B, C, H
and L. Although isolated from egg white, it is also present in
                                                                                                                                                                                                                                        PROSITE;
Thiol pro
                                                                                                                                                                                                                                                                                                                                                                             EMBL; J05077; AAA48744.1;
PIR; A34456; UDCH.
PDB; 1CEW; 31-JAN-94.
PDB; 1A67; 27-MAY-98.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
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"The disulphide bridges of human cystatin C (gamma-trace)
cystatin.";
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CHARACTERIZATION OF PROTEIN.
MEDLINE=83256421; PubMed=6409085;
MEDLINE=83256421; PubMed=6409085;
A Brown M.A., Kembhavi A.A., Nicklin M.J.H.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The 2.0 A X-ray crystal structure of chicken egg white cystatin and its possible mode of interaction with cysteine proteinases."; EMBO J. 7:2593-2599(1988).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chicken serum.";
Biochem. J. 211:129-138(1983)
                                                                                                                                                                                                                                                                                  Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities
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MEDLINE=89052676; PubMed=3191914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=89252033; PubMed=2721673;
Laber B., Krieglstein K.. Hensche
                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                   InterPro
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   send
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                     Phosphorylation;
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REACTIVE SITE.
SECONDARY AREA
                                                                          PHOSPHORYLATION (PARTIAL)
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                                                                                                                                                                                                                                     Signal;
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15-JUL-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE.
TISSUE=Egg white;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cystatin (Egg-white cystatin).
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
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HSSP; P01038; 1CEW
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SMART; SM00043; CY; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEBS Lett.
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(Rel. 36, Last sequence update)
(Rel. 41, Last annotation updat
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ilarity 42.5%;
Conservative
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                                                                                                                                                                                                                               inhibitor; Phosphorylation.
9 REACTIVE SITE.
3 SECONDARY AREA
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Pred. No. 0.00
9; Mismatches
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Pred. No. 0.
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                                                                                                                                                                                                                                                                                                                                                                                               cystatin family
                                                                             Mismatches
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es 14; Indels
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                                                                                                                Length 116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      inhibits papain and
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RESULT 15 CYT_BITAR ID CYT_BITAR

STANDARD;

PRT;

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Search completed: March 23, 2004, 17:11:06 Job time: 6.87448 secs
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                                                                                                             Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                 DISULFID
VARIANT
SEQUENCE
                                                                                                                                                                                                                                              -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARIY: Belongs to the cystatin family.
PIR, A28793, A28793.
HSSP; P01038; 1CEW.
InterPro; IPR000010; Cystatin.
Pfam; PF00031; Cystatin; 1.
SMART; SM00043; CY; 1.
SMART; SM00043; CY; 1.
SMART; PF000287; CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                            TISSUE-Venom;
MEDLINB-88076861; PubMed=3500714;
Ritonja A., Evans H.J., Machleidt W., Barrett A.J.;
"Amino acid sequence of a cystatin from venom of the African puff adder (Bitis arietans).";
Biochem. J. 246:799-802(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P08935;
01-NOV-1988 (Rel. 09, Created)
01-NOV-1988 (Rel. 09, Last sequence update)
01-NOV-1988 (Rel. 09, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Cystatin.
Bitis arietans (African puff adder).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Viperinae; Bitis.
                                                                                                                                                                                                             Thiol protease inhibitor.

ACT_SITE 3 3

SITE 47 51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=8692;
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47
65
57
111 AA;
                                                                                                           29.0%; Score 83.5; DB 1; Length 111; ilarity 33.9%; Pred. No. 0.00084; Conservative 13; Mismatches 17; Indels
                                                                                                                                                                3 RI
51 SI
81 PR
57 M
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SECONDARY AREA OF CONTACT.
PROBABLE.
M -> T (IN EQUAL AMOUNT).
M : 1A31B6B246ACA10C CRC64;
                                                                                                            9;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                               SPTREMBL_25:*

1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate
6: sp_manmal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_blage:*
10: sp_plage:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:
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15: sp_bacteriap:*
16: sp_bacteriap:*
17: sp_archeap:*
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288
1 KESDDKYHFRIFRVI
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Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                      sp_organelle:*
sp_phage:*
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sp_virus:*
sp_vertebrate:*
sp_unclassified:*
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sp_mammal:*
sp_mhc:*
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SUMMARIES

16	15	14	13	12	11	10	9	89	7	6	տ	.4	ω	N	1	Result No.
69	69.5	69.5	72	74	75	76.5	77	86	86	97	104	114	114	158	288	Score
24.0	24.1	24.1	25.0	25.7	26.0	26.6	26.7	29.9	29.9	33.7	36.1	39.6	39.6	54.9	100.0	Query
149	149	146	140	161	148	109	425	112	112	140	103	141	141	139	138	Query Match Length
11	11	11	11	u	σ	u	w	13	13	11	.4	11	11	11	4	ag a
Q8VHC1	Q9D1B1	Q8K397	Q80Y72	016159	Q9NH95	Q9TY65	Q12700	Q98SR3	Q98SR4	Q9EPX9	Q8WXU5	Q80ZN5	Q9DAP1	Q8K5A3	Q8WXU6	ij
Q8vhc1 rattus norv	Q9d1b1 mus musculu	Q8k397 mus musculu	Q80y72 mus musculu	O16159 brugia mala	Q9nh95 litomosoide	Q9ty65 onchocerca	Q12700 debaryomyce	Q98sr3 acipenser s	Q98sr4 acipenser s	. Q9epx9 mus musculu	Q8wxu5 homo sapien	Q80zn5 mus musculu	Q9dap1 mus musculu	Q8k5a3 rattus norv	Q8wxu6 homo sapien	Description

ALIGNMENTS

01-JUN-2003

(TrEMBLrel.

24,

Last annotation update)

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RESULT 3
Q9DAP1
ID Q9DA
MEDLINE2108566; Pubmeusial Minagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., A krakawa T., Hara A., Fukunishi Y., Komno H., Adachi J., Fukuda S., A Arakawa T., Hara A., Fukunishi Y., Komno H., Adachi J., Fukuda S., A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., A Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Ra Kadota K., Mateuda H.A., Ashburner M., Batalov S., Casavant T., Ra Kadota K., Mateuda H.A., Ashburner M., Batalov S., Casavant T., Ra Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Ra Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Ra Schriml L.M., Staubli F., Szukki R., Tomita M., Wagner L., Washio T., Ra Bake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Ra Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Ra Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Ra Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Ra Gustincich S., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Ra Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Ra Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wanshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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                                                                                                     EMBL; AK005665; BAB24175.1; --
HSSP; P01038; 1CEW.
MGD; MGI:1916544; 1700006C19Rik.
GO; GO:0004869; F:cysteine protease inhibitor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9DAP1;
01-JUN-2001
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SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=Sprague-Dawley; Hamil K.G., Hall S.H.;
                                                                                                                                                                                                                       "Functional annotation of a full-length Nature 409.685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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Mammalia; Eutheria;
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GO; GO:0004869; F:cysteine protease inhibitor activity;
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases
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                             Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                         Hayashizaki
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                                                                                   InterPro; IPR000010; Cystatin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 52
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28; Conservative
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Rodentia;
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16811 MW;
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53.8%;
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Last sequence update)
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2; Mismatches
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Pred. No.
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  C20FA0D8B1AC378C CRC64;
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                                                                                                                                                                                                                                                              mouse cDNA
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Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local &
                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q80ZN5;
                                                                                                                                                                                                                                  Hamil K.G., Liu Q., Zhang Y.-L., French F.S., "SC13: A novel epididymal specific member of t Submitted (JAN-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00031; cystatin; 1.
ProDom; PD001231; Cystatin_C/M; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; BC048681; AAH48681.1; -. GO; GO:0004869; F:cysteine protease InterPro; IPR000010; Cystatin. InterPro; IPR003243; Cystatin C/M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg R.; Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2003 (TrEMBLrel. 24, 01-JUN-2003 (TrEMBLrel. 24, 01-OCT-2003 (TrEMBLrel. 25, RIXEN CDNA 1700006C19 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003
                                                                                                                                                                  EMBL; AF335481; AAL71992.1; -.
GO; GO:0004869; F:cysteine protease inhibitor activity; IEA
                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                    SC13delta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2002
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8WXU5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8WXU5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rissum=Testicle;
                                                                                                                                                  Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ຫ
                                                                                                                                                  PF00031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l Similarity 44.;
23; Conservative
                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCVPQE
                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARTMCKKVAGDNENCLFQQ 108
  KESDDKYHFRIFRVLKVQRQ 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARTMCKKIAGDNENCLFQQ 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KESDDKYHERIERVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCVPQE 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141 AA;
                                                                                                                              103 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                  cystatin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Primates;
                                                                                                                            12285 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16825 MW; C20FA0D8A884951F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39.6%;
                                                              36.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      20,
20,
24,
                                                                                                                                                                                                                                                           Y.-L., French F.S., Hall S.H.; specific member of the cystatin family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
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Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence up
                                                              Score 104;
Pred No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 114; DB 11;
Pred. No. 3.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 114; DB 11;
Pred. No. 3.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 3.1e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                              05DD92C47387B022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inhibitor activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                4.7e-06;
                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
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                                                                                                                                                                                                                                       databases.
                                                                                  Length 103;
                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                          Indels
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Best Local S
Matches 20
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01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q98SR4;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                          species of sturgeons.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ
EMBL; AF334610; AAK16731.1; -.
HSSP; P01038; 1A90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acipenser sinensis (Chinese sturgeon)
Bukaryota; Metazoa; Chordata; Craniat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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VARIANT
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                                   Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                   Bai J., Lao H., Ye X., Li Y., Lo
"Molecular cloning and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=61970;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cystatin (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q98SR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF311741; AAG40283.1; HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9EPX9
                                                                                                     GO; GO:0004869; F:cysteine protease InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Liver,
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "FGF-2-Responsive neural stem cell autocrine/paracrine cofactor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=21010502; PubMed=11144350; 
Taupin P.J., Ray J., Fischer W.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cystatin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acipenser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Actinopterygii;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neuron 28:385-397(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO:0004869; F:cysteine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KGSNDAYHSRAIQVVRARKQLVAGVNYFLDVEMGRTTCTKSQTNLTDC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KESDDKYHFRI FRVLKVQRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPR000010;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chondrostei; Acipenseriformes; Acipenseridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; CYSTATIN; 1.
140 C
16 A
       CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15517 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33.7%; Score 97;
41.7%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cystatin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
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Mismatches 15
                                                                                                                                                                                                                                                                                                      analysis of cystatin cDNA from
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                                                                                                                                        inhibitor
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                                                                                                                                     activity;
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SEQUENCE
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Exo-1,3-beta-glucanase/1,3-beta-D-glucan glucanohydrolase
(EC 3.2.1.58).
MEDLINE=99154256; PubMed=10029988; Esteban P., del Rey F., Vazquez De Aldana C.R.; Esteban P., del Rey F., Vazquez De Aldana C.R.; "Cloning and characterization of 1,3-beta-glucanase-encoding genes from non-conventional yeasts."; Yeast 15:91-109(1999).
EMBL; 246971; CAB6951.1; -.
HSSP; P29717; 1CZ1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Molecular cloning and sequence analysis of cystatin cDI species of sturgeons.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases EMBL; AF33461; AAK16732.1;
HSSP; P01038; 1A90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cystatin (Fragment).
Acipenser schrenckii (Amur sturgeon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=ATCC 26077;
                                                                                                                                                                                                                         Eukaryota; Pungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Debaryomyces. NCBI_TaxID=27300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q12700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pram; PF00031; cystatin; 1.
PROSITE; PS00287; CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bai J., Lao H., Ye X.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-2001
01-JUN-2003
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                                                                                                                                                                                                                                                                                                 Debaryomyces occidentalis (Yeast) (Schwanniomyces occidentalis)
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17; Conserv
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17; Conserv
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42.5%; Pro
ative 11;
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11; Mismatches
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Pred. No.
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0.0013;
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Q9NH95;
01-OCT-2000
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MEDLINE=94336252; PubMed=8058358;
MEDLINE=94336252; PubMed=8058358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO; GO:0004553; F: hydrolase activity, hydrolyzing O-glycosyl GO; GO:0005975; P:carbohydrate metabolism; IEA. InterPro; IPR001547; Glyco_hydro_5. PROSITE; P800659; GLYCOSYL_HYDROL_F5; 1. Glycosidase; Hydrolase. Glycosidase; Hydrolase. SEQUENCE 425 AA; 49127 NW; 57F063ABB2FBF274 CRC64;
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                                                                              Eukaryota; Metazoa; Nematoda;
Onchocercidae; Litomosoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                           "Heterogeneity of IgG antibody responses antigens in microfiladermia positive indi province, Ecuador.", Parasite Immunol 16:201-209(1994). EMBL, $71364, AAC60509.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trenholme K.R., Bradley J.E.;
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01-MAY-2000
                          SEQUENCE FROM N.A.
Pfaff A.W., Hoffmann W.H.,
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                                                                                                         Litomosoides sigmodontis.
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                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0004869; F:cysteine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=6282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antigen maltose binding protein (Fragment).
                "Characterization
                                                                NCBI_TaxID=42156;
                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000010; Cystatin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0004338; F:glucan 1,3-beta-glucosidase activity; IEA. GO:0004553; F:hydrolase activity, hydrolyzing O-glycosyl GO:0005975; P:carbohydrate metabolism; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
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                                                                                                                                                                                                                                                                                                     15;
                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                 EQSNDEYHLMPIKLLKVSSQVVAGVKYKMDVQVARSQCKKSSNEKVDLTKC
                                                                                                                                                                                                                                                                            KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTC----QKPETTNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DHHHYOVFSAGELORSIDDHITVACNWGWDAKKEYHWNVAGEWSAA----LTDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DKYHFRI FRVLKVQRQVTDHL-----
    얁
                                                                                                                                                                                                                                                                                                                                                       109 AA;
                                                                                                                                (TrEMBLrel. 15, (TrEMBLrel. 15, (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
  the
                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
mann W.H., Taylor D.W., Schulz-Key H.; n and immunological properties of a cynfilarial parasite Litomosoides sigmod
                                                                                                                                                                                                                                                                                                                                                       12701 MW;
                                                                                                                                                                                                                                                                                                                 26.6%;
29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26.7%;
                                                                                                                                                                                                                                                                                                     15;
                                                                                                                                Created)
Last sequence Last anno
                                                                                                                                                                                                                                                                                                   Score 76.5; D
Pred. No. 0.02
15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 77; DB 3; Length 425
Pred. No. 0.077;
1; Mismatches 12; Indels
                                                                                           Chromadorea;
                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                      3C6B5EF14D8082BB CRC64;
                                                                                                                                sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                   inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                    148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      individuals
                                                                                                                                                                                                                                                                                                                   .022;
                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                           DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to cloned Onchocerca volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -EYHLNVEMOWTTCOKPETTNC 46
                                                                                           Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Guderian R.,
                                                                                                                                update)
                                                                                                                                                                                                                                                                                                     16;
                                                                                                                                                                                                                                                                                                                                                                                                                                   activity; IEA
  of a cystein 
sigmodontis.
                                                                                                                                                                                                                                                                                                                            Length 109;
                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Esmeraldas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maizels R.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
    protease
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                                                                                                                                                                                                                                                                            46
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             326
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IEA.
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OLOSSO
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DATAB
DR EMBL;
DR EMBL;
DR EMBL;
DR Intex
DR SART
DR PROSII
                                                                                                                                    RESULT 13
Q80Y72
RACCOSEDEDE
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Matches
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                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O16159;
O1-JAN-1998
O1-JAN-1998
O1-JUN-2003
                                                                                                           Q80Y72;
       Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                      01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                     "Two distinct cystatin-type cysteine protease inhibitors parasitic nematode Brugia malayi."; Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
Gregory W.F., Blaxter M.
Submitted (JUL-1997) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN; 1.
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AF229173; AAF35896.1; GO; GO:0004869; F:cysteine protease InterPro; IPR000010; Cystatin.
                                                Mus musculus (Mouse)
                                                           Cystatin-like 1.
                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                  Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                     EMBL; AF177193; AAD51086.1; -. GO; GO:0004869; F:cysteine protease InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda;
Onchocercidae; Brugia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brugia malayi (Filarial nematode worm).
Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cystatin-type cysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          016159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF015263; AAB69857.1;
                                                                                                                                                                                                                                                                                                                                                                                                                           Gregory
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l Similarity
13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 KESDDKYHFRIFRYLKVQRQVTDHLEYHLNVEMQWTTCQK
                                                                                                                                                                                                                                                                                                                                                                                                                            W.F.,
                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                             KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQSNDAYHLMPIKVLKVSSQVVAGMKYKMEIQVARSDCKK
                                                                                                                                                                                       QQSNDEYHLMPIKLLKVSSQVVAGVKYKMEVQVARSECKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148 AA;
                                                                                                                                                                                                                                                                                       161 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                           Maizels R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16686 MW;
                                                                                                                                                                                                                                                                                     18406 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.0%;
                                                                                                                                                                                                                                                 25.7%;
32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proteinase inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
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                                                                        24,
25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Mismatches
                                                                                                                                                                                                                                    Score 74; DB Pred. No. 0.07:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                        Last sequence update)
Last annotation updat
                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maizels R.M.;
EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 75;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LS-CYSTATIN.
                      Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2950AA89CA5339C9 CRC64
                                                                                                                                                                                                                                                                                       8081351EBE226EB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inhibitor activity; IEA
                                                                                                                                                                                                                                                                                                                                                    inhibitor
                                                                                                                          140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.048;
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                                                                                                                                                                                                                                                  .071;
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                                                                                                                          B
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                                                                        update)
                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                    activity;
                                                                                                                                                                                                                                                             Length 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 148;
                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102
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                                                                                                                                                                                                                                       Indels
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                                     Euteleostomi;
                       Murinae;
                                                                                                                                                                                                                                                                                                                                                     IEA
                                                                                                                                                                                                                                                                                                                                                                                                                  from
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                         Mug
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RESULT
Q8K397
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RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altachul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altachul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Scheetz T.E.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Schapteton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., WcEwan P.J., McKernan K.J., Malek J.A., Gunzartne P.H.,
RA Bosak S.A., WcEwan P.J., McKernan K.J., Malek J.A., Gibbs R.A.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RILlalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Willalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Whiting M., Touchman J.W., Green E.D., Dickson M.C.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Rodriguez A.C., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA Rodriguez A.C., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 14
 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                           Q8K397;
Q8K397;
01-OCT-2002
01-OCT-2002
                                                                              SMART;
                                                                                                                                                                           TISSUE-Mammary gland;
Strausberg R.;
Strausberg R.;
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                             EMBL; BC027680; AAH27680.1; -. GO:0004869; F:cysteine protease inhibitor InterPro; IPR000010; Cystatin.
Pfam; PF00031; Cystatin; 1.
                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                     RIKEN cDNA 1110017E11 gene (Fragment). Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; BC048646; AAH48646.1; -. GO; GO:0004869; F:cysteine protease Interpro; IPR000010; Cystatin. Interpro; IPR003243; Cystatin_C/M.
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                           SEQUENCE
                                                                                                                                                                                                                                                                             NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Testicle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Generation and initial analysis of more than 15,000 full-length humar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jones S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22388257; PubMed=12477932;
                                                                                TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00031; cystatin; 1.
m; PD001231; Cystatin_C/M; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59
                                                                                            SM00043; CY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SM00043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDDKYHFRIFRVLKVQRQVTDHLBYHLNVEMQWTTCQKPET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNDTYLYQVQKLIQGQMQLTTGVEYLVTVKIGRTKCKKNET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MAR-2003) to the EMBL/GenBank/DDBJ databases
                                                           146 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140 AA;
                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 22, Created)
(TrEMBLrel. 22, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N.A.
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                                                           16380 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16199 MW; 32633E99C4697DA0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.0%;
   24.1%;
27.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protease inhibitor activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 72; DB 1:
Pred. No. 0.11;
   Score 69.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99:16899-16903 (2002)
                                                           9D77BB9A6063A5C4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   146
DB
J.25;
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RX MEDLINE=21085660; PubMed=11217851;
RA MARBULINE=21085660; PubMed=11217851;
RA ALRAWA J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kadota S.,
RA Alzawa K., Mateuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Mateuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Mateuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Stabbli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Stabbli F., Suzuki R., Tomita M., Wagner L.,
RA Schriml L.M., Stabbli F., Suzuki R., Tomita M., Gariboldi M.,
RA Sakai K., Okido T., Full D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazarelli J., Mombaerts P.,
RA Lyons P., Marchionni L., Mashima J., Mazarelli J., Mombaerts P.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Hynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Query Match
Best Local
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01-JUN-2001
01-OCT-2003
                                                                                                                                                                                                                                  the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional 60,770 full-length cDNAs.":
                                                                                                                                     MGB;
                                                                                                                                                   EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=Medulla oblongata; MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=129S6/SvBvTac; TISSUE=Spleen;
Zeeuwen P.L.J.M., van Vlijmen-Willems I.M.J.J.,
Merkx G.F., Schalkwijk J.;
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1110017E11RIK OR CST6.
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                                                 SEQUENCE
                                                                                                                                                                                                                    60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Functional annotation of a full-length mouse cDNA collection.", Nature 409:685-690\,(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                             ; MGI:1920970; Cst6.
GO:0001533; C:cornified envelope; IDA.
GO:0008544; P:epidermal differentiation;
erPro; IPR000010; Cystatin.
                                                                                                                                                 ; AY093591; AAM;
; AK078116; BAC;
; P01038; 1CEW.
                                                                                                                                                                 AK003744; BAB22976.1;
AY093591; AAM11475.1;
AK078116; BAC37132.1;
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Rodentia;
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27.5%;

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    17, Last sequence update)
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Minimum DB
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Listing first 45 summaries
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and is greater No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.

SUMMARIES

25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	Մ	4	w	2	Ľ	Result No.
174.5	174.5	174.5	174.5	174.5	174.5	174.5	174.5	174.5	174.5	187.5	187.5	189	199.5	199.5	199.5	254	266	273	288	334	446	446	446	446	Score
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Aay81149	Abg75925	Aau76578	Aae04887	Aae04323	Aay81205	Aar37308	Aar25342	Aay81140	Aay81204	Aay81212	Aay81203	Aay81210	Abg75917	Aau76555	Aae04315	Aae04432	Aae02403	Aay96576	
Human mu	Human cys	Human Zcy	Human pro	Human 2cy	Egg white	Chicken	Chicken e	Egg white	Human cys	Human Zcy	Alternati	Mouse tes	Murine cy	Murine cy					

ALIGNMENTS

AAU79865 standard; peptide; 80 ₽

AAU79865;

15-JUL-2002 (first entry)

Human cystatin-8 (Zcys8) antigenic fragment #13.

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved spersperm motility; fertilisation; antigenic peptide. sperm;

Homo sapiens.

WO200220567-A2.

14-MAR-2002.

29-AUG-2001; 2001WO-US026868.

01-SEP-2000; 2000US-0230230P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL, Gao Z, Bishop PD;

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

Claim 2; Page 98; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large

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RESULT 2
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                      The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expression of a ZCy88 gene in a biological sample and Zcy88 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the ZCy88 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcy88 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcy88)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper
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Zcys8.

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associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the

for the

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events

Claim 2; Page 94-95; 100pp; English.

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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper sperm motility; fertilisation; antigenic fragment.
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The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sit of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in
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The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer proceagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminfluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and
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                                                                                                                                                                                                             Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which let to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                              Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
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RESULT 8
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AC AAU7
XX AAU7
XX Huma
XX Cyst
XW Sper
XX Homc
XX Homc
XX Hom
CX II
C
                                   The invention describes an isolated mammalian cystatin-8 (Zcys8)

CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant

CC protein in an individual and thus inhibiting the thrombotic events

CC associated with cancer; promoting spermatogenesis, modulating seminal

CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm

CC motility and fertilisation; and as antigenic peptides to generate

CC antibodies. Zcys8 is useful as research reagent for characterising sites

CC of interaction between Zcys8 and its receptor. Zcys8 is useful in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enhancing fertilisation during assisted reproduction in humans and in

CC animals. Anti-(I) antibodies are useful to screen biological samples like

CC presence of Zcys8. The antibodies are also useful to isolate large

CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.

CC The polynucleotide encoding (I) is useful to detect and to localise the

CC coligonucleotide probes are useful for in vivo diagnosis. The

CC copy number contain a mutation in the Zcys8 gene like aneuploidy, gene

CC copy number changes, insertions, deletions, restriction site changes and

CC This sequence represents an anticenic pertide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cystatin-8; Zcys8; cancer; procoagulant protein; spermatogenesis; seminal fluid viscosity; cryopre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Page 97-98; 100pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-SEP-2000; 2000US-0230230P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-AUG-2001; 2001WO-US026868
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sperm motility; fertilisation; antigenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human cystatin-8 (Zcys8) antigenic fragment #11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUL-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU79863 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ( ZYMO )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-383044/41.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49
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Pred. No. 2.5e-25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cryopreserved
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human cystatin-8 (Zcv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    thrombosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
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RESULT 9
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                                               cc motility and fertilisation; and as antigenic peptides to generate cantibodies. Zoys8 is useful as research reagent for characterising sites cof interaction between Zoys8 and its receptor. Zoys8 is useful in cc enhancing fertilisation during assisted reproduction in humans and in cc animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the Cc blood, urine, saliva, tissue biopsy and autopsy material in vitro for the Cc presence of Zoys8 The antibodies are also useful to isolate large cc quantities of Zoys8 protein and DNA sequences that encode Zoys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zoys8 gene in a biological sample and Zoys8 collgonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's coplynucleotide encoding (I) is useful in determining whether a subject's coplynucleotide encoding (I) is useful in determining whether a subject's coplynucleotide insertions, deletions, restriction site changes and restriction site changes and companies.
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Matches
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                                                                                                                                                                                                                                                                                                                                   polypeptide (I) (I) is useful for: inhibiting cancer proceagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating semiful viscosity, enhancing viability of cryopreserved sperm, sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human cystatin-8 (Zcys8) antigenic fragment
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                                                                                                                                                                                                                                                                                                                                                                                                                The invention describes an isolated mammalian cystatin-8 (2cys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2; Page 97; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-SEP-2000; 2000US-0230230P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         spermatogenesis;
sperm motility; f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cystatin-8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU79860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU79860 standard; peptide; 46
                                 This sequence represents an antigenic peptide of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-AUG-2001; 2001WO-US026868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ZYMO ) ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zcy88; cancer; procoagulant protein; thromboesis; seminal fluid viscosity; cryopreserved ity; fertilisation; antigenic peptide.
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Pred. No.
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                                   cystatin-8
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Query Match Sequence

Score

254;

DB <u>ن</u> 46 AA;

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ARESULT 10
ARED2404
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XX AABD2
AC AAABD2
AC AAABD2
XX ID-AU
DT 10-AU
DE Murin
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XX CRES;
PD 22-M2
PP 01-NC
XX 20-NC
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                                                                                  AAE04433
                                                                                                               RESULT 11
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Best Local S
Matches 35
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  AAE04433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to cystatin T (also known as crys3) DNA as protein sequences. Cystatin T is testis specific and is homologous to cystatin-related epididymal specific gene (CRES) and type 2 cystatins. Cystatins inhibit cysteine proteinases and are found with male reproductive tissues and secretions. Cystatin T sequence is useful for modulating spermatogenesis and studying, diagnosing and treating reproductive disorders. The present sequence is murine cystatin-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cystatin T polypeptides are useful for modulating spermatogenesis studying, diagnosing and treating reproductive disorders.
                                                         AAE04433 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 142 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Col
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-NOV-1998;
28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Murine; cystatin CRES; inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 epididymal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US6235708-B1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spermatogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Murine cystatin-related epididymal specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE02404 standard; protein; 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ZYMO') ZYMOGENETICS INC.
                                                                                                                                                                                                 115
                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                            1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELH
                                                                                                                                                                                                                                                                                                                                                                                                                     35;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                               KQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                                                        EYNKESEDKYVFLVDKILHAKLQITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPELE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN 46
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                                                                                                                                                                                               KKMSCSFLVGALPWNGEFNLLSK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specific
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0109217P.
99US-0156382P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-00431480
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T; zcys3; cystatin-related epididymal specific protein; cysteine proteinase; male reproductive tissue; testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       therapy; reproductive disorder.
                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                           44.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CRES) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Pred. No. 4.6e-23; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                     25;
                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 199.5; DB 4;
Pred. No. 6.6e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                           protein which is homologous to mouse testis specific cystatin T (also known as zcys3). The cystatin T polymuclectide is useful in gene therapy applications, where it is desired to increase or inhibit cystatin T activity. It is also useful for producing cystatin T polypeptide, as well as for detecting the expression of a cystatin T gene in a biological sample. The cystatin T is useful for modulating spermatogenesis, and may be used to study or modulate that function in in vitro or in vivo systems. In particular, it is also useful for enhancing sperm production, increasing the number of viable sperm in a sample, or enhancing
                                                                         06-NOV-2003
                                                                                                      ADA14374;
                                                                                                                                                                                                                                                                                                                                                                                     Sequence 142 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polynucleotides encoding testis-specific cystatin-like protein cystatin T, useful in gene therapy for modulating cystatin T activity, particularly for modulating spermatogenesis, or enhancing sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-NOV-1998;
28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse; cystatin 7 cystatin-related
                                                                                                                                  ADA14374 standard; protein; 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is mouse cystatin-related epididymal specific protein which is homologous to mouse testis specific cystatin T (al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Col 47-48; 33pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-407271/43
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                                           Mouse spermatogenesis related protein sequence SEQ ID NO:116
                                                                                                                                                                                                                                                                                                                                                                                                                  fertilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             production
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                                                                                                                                                                                                                                      58
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                                                                                                                                                                                                                                                                                                                              35
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                                                                                                                                                                                                                                                                                               1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELH
                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                         KKMSCSFLVGALPWNGEFNLLSK 137
                                                                                                                                                                                                                                      KQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                   EYNKESEDKYVFLVDKILHAKLQITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPELE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or
                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0109217P.
99US-0156382P.
99US-00431480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T; zcys3; testis specific; depididymal specific gene;
                                                                                                                                                                                                                                                                                                                                        44.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Æ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               epididymal specific
                                                                                                                                                                                                                                                                                                                              25;
                                                                                                                                                                                                                                                                                                                           Score 199.5; DB 4
Pred. No. 6.6e-16;
5; Mismatches 20
                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               spermatogenesis modulator;
CRES; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CRES)
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                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                         142;
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mouse; spermatogenesis; gene cluster; mutagenicity; reproductive toxicity; reproductive capacity; mutation;

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CC cluster; (2) oligonucleotides of 10-99 bases containing the gene (C) cluster; (2) oligonucleotides of 10-99 bases containing the gene (C) oligonucleotides; (4) microarrays containing these (C) oligonucleotides; (4) primer sets for PCR amplification of cDNA or (C) genomic DNA for genes of the cluster; (5) polypeptides encoded by the (C) genes in the cluster; (6) antibodies to these polypeptides; (7) a method (C) for testing the mutagenicity and reproductive toxicity of a test (C) substance, and assessment of the reproductive capacity of a test (C) individual, by analysis of mutation and expression abnormalities of genes (C) in the cluster; (8) polymucleotides which are mutations of the human male (C) sterility associated gene scott (succiny) CoA:3-oxo acid CoA transferase (C) sterility associated gene scott (succiny) CoA:3-oxo acid (C) transferase (C) fluman scott including one or more of the following specific mutations: T129C, (C) T870G, C1071T, T1667C; (9) oligonucleotides containing partial sequences (C) fluman scott ides encoded by human scott gene and having one or more of the mutations (10) primer (11) polypeptides encoded by human scott gene and having one or more of the mutations (12) polymucleotides which are mutations (13) polymucleotides which (14) polymucleotides which (15) polymucleotides which (15) polymucleotides which (15) polymucleotides which (16) polymucleotides which (17) polymucleotides (17) polymucleotid
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Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             are mutations of the human male sterility associated gene protamine2, (14) maribodies (including labelled antibodies) to these polymeptides; (15) a method for determining the presence or absence of these mutant polymucleotides in genomic DNA; (16) diagnosis of human male sterility using this method; (17) DNA probes containing sequences of these mutant polymucleotides; and (18) DNA chip containing sequences derived from these mutant polymucleotides. The methods of the present invention can be used in the diagnosis of human male sterility; testing the reproductive coxicity and mutagenicity of substances; and assessing the reproductive capacity of individuals. The present sequence represents a mouse spermatogenesis related protein, which is encoded by a cDNA sequence from the mouse spermatogenesis gene cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes a mouse spermatogenesis gene cluster containing 89 genes (see the cDNA sequences of ADA1442 to ADA14530).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        expression abnormality; human male sterility associated gene; scot-t; succinyl CoA:3-oxo acid CoA transferase; human male sterility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 143
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-FEB-2002; 2002JP-00036649.
27-DEC-2002; 2002JP-00381241.
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                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
KQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                    EYNKESEDKYVPLVDKILHAKLQITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPELE
                                                                                                                                                                                                                                             QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELH 57
                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                     44.7%; Score 199.5; DB 6;
42.2%; Pred. No. 6.7e-16;
Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 143;
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RESULT 14 ADD46708

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RESULT 13
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                                                                                                                                                                                                                                                 The invention describes an isolated mammalian cystatin-8 (Zcys8)

CC polypeptide (I). (I) is useful for: inhibiting cancer processulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal Cf fluid viscosity, enhancing viability of cryopreserved sperm, sperm CC motility and fertilisation; and as antigenic peptides to generate CC antibodies. Zcys8 is useful as research reagent for characterising sites cof interaction between Zcys8 and its receptor. Zcys8 is useful in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in vitro for the CC plood, urine, saliva, tissue biopsy and autopsy material in vitro for the CC presence of Zcys8. The antibodies are useful to screen biological samples like CC plood, urine, saliva, tissue biopsy and autopsy material in vitro for the CC presence of Zcys8. The antibodies are also useful to isolate large CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. CC represence of Zcys8 gene in a biological sample and Zcys8 genes in a biological sample and Zcys8 gene in a biological sample contains a mutation in the Zcys8 gene like aneuploidy, gene converges contain a mutation in the Zcys8 gene like aneuploidy, gene and converges contain a mutation in the Zcys8 gene like aneuploidy, gene converges contain a mutation in the Zcys8 gene like aneuploidy.
                                                     Matches
                                                                                               Query Match
                                                                                                                                           Sequence
                                                                                                                                                                                    copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-383044/41.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU79862 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Page 97; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Holloway JL, Gao Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-AUG-2001; 2001WO-US026868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sperm motility; fertilisation; antigenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human cystatin-8 (Zcys8) antigenic fragment #10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ZYMO ) ZYMOGENETICS INC
    23 QVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 55
                                                                         Similarity
                                                                                                                                             33 AA;
                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                      42.4%;
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                                                0;
                                                                      Score 189;
Pred. No.
                                                     Mismatches
                                                                    2.1e-15;
                                                                                                 DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cryopreserved sperm;
                                                                                            Length 33;
                                                     Indels
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                                                Gaps
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CC claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a CC kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence CC that is differentially expressed in neuronal tissue of a first animal CC subjected to pain, a method for identifying an agent CC expression of a polynucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially CC expressed in an animal subjected to pain, a method for identifying a compound which regulates the compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a compound control that regulates the cc vivity in an animal of one or more of the polypeptides given in the CC expression, a method for identifying a compound useful in treating polypeptides or their antibodies. The polynucleotide or the compound that composition comprising the one or more CC modulates its activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (CNung), chronic constriction conjury (CCT) and spared nerve injury (SNN)) in an animal (e.g. gene CC the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed CC specification, which is differentially expressed during pain. Note: The sequence at a sequence form directly from WIPO at CC fth, who will shed not sequence form directly from WIPO at CC fth, who will shed not sequence.
                                                                                                                                                                  Matches
                                                                                                                                                                                                         Query Match
Best Local
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01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention discloses a composition comprising two or more isolated or human polynucleotides or a polynucleotide which represents a fragme derivative or allelic variation of the nucleic acid sequence. Also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus.
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                                                                                                                                                                                                                                                                                                                                 Sequence 142 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                          ftp.wipo.int/pub/published_pct_sequences.
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    55
                                                   1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELH 57
                                                                                                                                                                                                         Similarity
EYNKGSEDKYLFLLDKTLHATLQITDRMEYHIDVQISRSNCRKPLNNTENCIPQKNPKLE 114
                                                                                                                                                                       Conservative
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                                                                                                                                                                  23; Mismatches
                                                                                                                                                              Score 187.5; DB 7;
Pred. No. 1.8e-14;
23; Mismatches 23;
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Sequence 142 AA,

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                                                                                                            CC kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal CC subjected to pain, a method for identifying a compound which regulates CC the expressed in an animal subjected to pain, a method for identifying a compound which regulates CC compound that regulates the activity of one or more of the CC polynucleotides, a method for producing a pharmaceutical composition, a cc method for identifying a compound or small molecule that regulates the CC method for identifying a compound which is differentially composition, a method for identifying a compound useful in treating compound that regulates the cc activity in an animal of one or more of the polypoptides given in the composition, a method for identifying a compound useful in treating compain and a pharmaceutical composition comprising the one or more complicates or their antibodies. The polypucleotide or the compound that composition in the compound that composition in the compound constriction compain (e.g. spinal segmental nerve injury (Chung), chronic constriction conjury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene conjury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene cc the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed conjury in the printed conjuration of the printed conjuration of the printed at the conjuration of the printed at the conjuration of the printed 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or human polynucleotides or a polynucleotide which represents a fragmer derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a which is differentially regulated in an animal subjected to pain and a
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01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention discloses a composition comprising two or more isolated rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page; 1017pp; English.
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GENBANK; AAC36317.
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2004 Compugen Ltd.
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US-09-617-302-3

US-09-617-302-4

US-09-431-480-2

US-09-617-302-2

US-09-617-302-1

US-09-775-932-1

US-08-791-522-4

US-08-849-303-15

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MSCSFLVGALPWNGEFNLL plication US/096173 5529 ATION: colloway, James L. clidhaus, Andrew MTION: TESTIS SPEC EE: 98-72 C1 CATION NUMBER: US/0 G DATE: 2000-07-17 TION NUMBER: 09/43 DATE: 1999-11-01 DATE: 1999-11-01	Query Match 44.7%; Score 199.5; DB 3; Length 142; Best Local Similarity 42.2%; Pred. No. 2e-18; Matches 35; Conservative 25; Mismatches 20; Indels 3; Ga Oy 1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQER- : : : : : : : : : : : :	RESULT 1 US-09-431-480-3 ; Sequence 3, Application US/09431480 ; Patent No. 6235708 ; GENERAL INFORMATION: APPLICANT: HOLIOWAY, James L. APPLICANT: Feldhaus, Andrew ; TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE ; FILE REFERENCE: 98-72 ; CURRENT APPLICATION NUMBER: US/09/431,480 ; CURRENT FILING DATE: 1999-11-01 ; EARLIER APPLICATION NUMBER: 60/109,217 ; EARLIER FILING DATE: 1999-11-20 ; EARLIER FILING DATE: 1999-09-28 ; NUMBER OF SEQ ID NOS: 22 ; EARLIER FILING DATE: 1999-09-28 ; NUMBER OF SEQ ID NOS: 22 ; SOFTWARE: FASTSEQ for Windows Version 3.0 ; SEQ ID NO 3 ; LENGTH: 142 ; TYPE: PRT ; ORGANISM: Mus musculus US-09-431-480-3	28 145.5 32.6 146 5 PCT-US95-07135-9 29 144.5 32.4 121 4 US-09-775-932-8 30 144.5 32.4 141 3 US-08-744-138-6 31 144.5 32.4 141 4 US-09-241-376-6 32 144.5 32.4 141 4 US-09-248-303-24 34 142.5 32.0 140 4 US-09-886-319A-4 35 142.5 32.0 140 4 US-09-886-319A-4 36 138.5 31.1 140 3 US-09-817-302-5 37 138.5 31.1 140 3 US-09-411-480-5 39 133.5 29.9 112 4 US-08-89-303-16 40 133.5 29.9 112 4 US-08-89-303-16 41 131.5 29.5 141 3 US-08-775-932-24 42 131.5 29.5 141 3 US-09-775-932-24 43 131.5 29.5 141 3 US-09-431-480-11 44 131.5 29.5 141 3 US-09-431-480-11 45 131.5 29.5 141 3 US-09-241-302-11 46 131.5 29.5 141 3 US-09-241-302-11 47 131.5 29.5 141 4 US-09-241-302-11 48 131.5 29.5 141 4 US-09-241-302-11
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PRIOR APPLICATION NUMBER: 60/109,217

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US-09-431-480-4
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US-09-431-480-4
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EARLIER APPLICATION NUMBER: 60/109,217

EARLIER APPLICATION NUMBER: 60/109,217

EARLIER FILING DATE: 1998-11-20

EARLIER APPLICATION NUMBER: 60/156,382

EARLIER FILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 22

SOFTWARE: FastSEQ for Windows Version 3.0
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Best Local S
Matches 35
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Patent No. 6235708
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
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LENGTH: 142
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APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILICATION NUMBER: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
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PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-09-28
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TYPE: PRT
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Similarity 42.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 39.1%; Score 174.5; DB 3; Similarity 42.2%; Pred. No. 3.8e-15; 35; Conservative 22; Mismatches 23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EYNKESEDKYVFLVVKTLQAQLQVTNLLEYLIDVEIARSDCRKPLSTNEICAIQENSKLK 114
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RESULT 6
US-09-617-302-2
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SEQ ID NO 4
LENGTH: 142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/09431480 Patent No. 6235708 GENERAL INFORMATION:
                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                            Sequence 2, Application US/09617302 Patent No. 6245529
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 38.0%; Score 169.5; DB 3
Best Local Similarity 42.2%; Pred. No. 1.7e-14;
Matches 35; Conservative 17; Mismatches 28
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APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72
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PRIOR TILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/:
PRIOR FILING DATE: 1999-99-28
NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 141
TYPE: PRT
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                   KQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                                                                                                                                              QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCV-PQERELH 57
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                                                                                                                                                                                                                                                                                                                                                                   EYNKASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARTMCKKIAGDNENCLFQQDPKMK 113
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Pred. No. 3.8e-15;
?2; Mismatches 23
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; SOPTWARE: FastSEQ for W:
; SEQ ID NO 2
; LENGTH: 141
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-617-302-2
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                                                                                                                                                                                                                              RESULT 8
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US-09-775-932-16
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                                                                                                                                      Sequence 4, Application US/08791522
Patent No. 5935817
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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GENERAL INFORMATION:
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CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
PRIOR FILING DATE: 1998-08-05
UNMBER OF SEQ ID NOS: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: University of British Columbia TITLE OF INVENTION: Production and use of Modified Cystatins FILE REFERENCE: 58069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1: NUMBER OF SEQ ID NOS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                           APPLICANT: Bandman, Olga
APPLICANT: Goli, Surya K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
                                        NUMBER OF SEQUENCES:
                       CORRESPONDENCE ADDRESS
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    ADDRESSEE:
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                                                                                                                                                                                                                                                                                          91
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 34.6%; Score 154.5; DB 4; Length 116; Similarity 38.3%; Pred. No. 1.2e-12; 31; Conservative 17; Mismatches 30; Indels 3
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                                                                                                                                                                                                                                                                                        KYTTCTFVVYSIPWLNQIKLL 111
                                                                                                                                                                                                                                                                                                                               KQVNCFFSVFAVPWFEQYKIL 78
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Incyte Pharmaceuticals, Inc.
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                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/09314777 Patent No. 6110686
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CURRENT APPLICATION NUMBER: US/no/-
FILING DATE:
                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEO for Wir
                                                                                                                                                                                                                                                                   APPLICANT: Goli, Surya K.
TITLE OF INVENTION: NOVEL H
TITLE OF INVENTION: PROTEIN
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TOPOLOGY: line
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOCTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
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                                                                                                                                                                       CITY: Palo Alto
STATE: CA
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                                                                                                                                          ZIP: 94304
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CLONE: 118195
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FILING DATE: Filed Herewith
                                                                                                                                                                                                     STREET:
                                                                                                                                                      COUNTRY:
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                                                                                                                                                                                                                   DDRESSEE:
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38.3%; Pred. No. 1.5e-12;
ative 17; Mismatches 30
                                                                                                                                                                                                                                                                                 NOVEL HUMAN CYSTATIN-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/791,522
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PRIOR APPLICATION DATA: APPLICATION NUMBER:

08/791,522

CLASSIFICATION:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 15, Application Patent No. 6680424
GENERAL INFORMATION:
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Best Local S
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415.855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: 111cm-
IMMEDIATE SOURCE:
IMMEDIATE GenBank
                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                         TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF
                                                                                                                                                                                                 APPLICATION NUMBER: US/0 FILING DATE: 21-MAY-1997 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIBRARY: GenB
CLONE: 118195
                                                                      TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Hackensack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
                                                       TELEX:
                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
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                                                                                                                                                                                                                                                                                                                                                               07601
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31; Conservative
                                                       133521
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KOVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                                                                                                                                                                                                                              New Jersey
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   139 amino acids
                                                                        201-343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McPherson, Michael J.
Urwin, Peter E.
                                                                                                                                                                                                                                                                                                                                                                               USA
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                                                                                           201-487-5800
                                                                                                                                                                                                                                                                                                                           Floppy disk
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38.3%; Pred. No. 1.5e-12;
tive 17; Mismatches 30;
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                                                                                                                         US-08-849-303-19
                                                              Matches
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Best Local Similarity
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                                                                                         Query Match
                                                                                                                                                                                                                       TELEX: 133521
INFORMATION FOR SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION: APPLICANT: Ackins
                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 0/00/2
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                                                                                     TOPOLOGY: 11
MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: McPherson, Michael J.
APPLICANT: Urwin, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
NUMBER OF SEQUENCES: 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                TELEFAX: 20-
TELEFAX: 133521
                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 21-MAY-1997 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 QYNKESDDKYHFRIFRYLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNC-VPQERELH 57
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QYNKBSDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC-VPQERELH 57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KOVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08849303
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                                                                                                                                                                                                                                                                           201-343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
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                                                             Conservative
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                                                                                                                                                                   linear
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NO
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                                                                                                                                                                                   single
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                                                                           34.0%;
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t; Pred. No. 1.5e-12;
17; Mismatches 30;
                                                              18;
                                                          Score 151.5; DB 4;
Pred. No. 3.3e-12;
"" matches 24;
                                                                                           Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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100 RKALCSFQIYSVPW 113

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RESULT 12
5432264-6
;PATCHICANT: GRUBB, ANDERS;LUNDWALL, AKE;ABRAHAMSON, MAGNUS;
;DALBOGE, HENRIK
; TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED;
;BY EXPRESSION IN A PROCARYOTIC HOST CELL
;NUMBER OF SEQUENCES: 8
;CURRENT APPLICATION NUMBER: US/07/929,290
;APPLICATION NUMBER: US/07/929,290
RESULT 14
5432264-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
US-09-775-932-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/09775932 Patent No. 6534477
                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Univers
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Best Local 9
                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/775,932
CURRENT FILING DATE: 2001-02-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 13-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
FILING DATE: 20-MAY-1988
                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: University of British Columbia TITLE OF INVENTION: Production and use of Modified Cystatins
                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                 ENGTH: 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 146
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                                                                    93
                                                                                                   58 KOVNCFFSVFAVPW 71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59 EYNKASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNCPFHDQPHLK 118
                                                                                                                                        33 EYNKASNDMYHSRALQVVRARKQIVAGVNYFLDVELGRTTCTKTQPNLDNCPFHDQPHLK 92
                                                                                                                                                                                                           28;
                                                                                                                                                          1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC-VPQERELH 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                   PatentIn Ver. 2.0
                                                                    RKAFCSFQIYÁVPW 106
                                                                                                                                                                                                         32.6%; ilarity 37.8%; Conservative 1
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IMBER: 60/095,503
                                                                                                                                                                                                                                                                                                                                                                                                  1998-08-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.2%; Score 148; DB 6; Length 146; 37.3%; Pred. No. 1.1e-11;
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                                                                                                                                                                                                           16;
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                                                                                                                                                                                                         Score 145.5; DB 4;
Pred. No. 1.9e-11;
.6; Mismatches 27;
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                                                                                                                                                                                                                                           Length 120;
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TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED
BY EXPRESSION IN A PROCARYOTIC HOST CELL
NUMBER OF SEQUENCES: 8
CURRENT APPLICATION DATA:
; MOLECULE TYPE:
US-08-832-535-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-832-535-11
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SEQ ID NO:4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Patent No. 5432264
; Patent No. 5432264
; APPLICANT: GRUBB, ANDERS;LUNDWALL, AKE;ABRAHAMSON, MAGNUS;
                                                                                                                                                                                                                    MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARB: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/832,535
FILING DATE: 03-APR-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: KIMBALL, PAUL C.
REGISTRATION NUMBER: 34,610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                  TELEFAX: (201) 994-1744 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 145 amino acid
                                                                                                                                                                       REFERENCE/DOCKET NUMBER: PITELECOMMUNICATION INFORMATION: TELEPHONE: (201) 994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: GENTZ, REINER L
TITLE OF INVENTION: HUMAN CYSTATIN F
NUMBER OF SEQUENCES: 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
                                                   TYPE: amino STRANDEDNESS:
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FILING DATE: 13-AUG-1992
                                    TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: US
ZIP: 20850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: ROCKVILLE
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                                                                         amino acid
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                                                                                           145 amino acids
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YU, GUO-LIANG
GENTZ, REINER L
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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seq length: 2000000000
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1: /cgn2_6/ptodata/1/pubpaa/US07 PUBCOMB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06 NEW PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06 NEW PUB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*

6: /cgn2_6/ptodata/1/pubpaa/US08_NEW PUB.pep:*

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12: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*

13: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*

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Match
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Gapop 10.0 , Gapext 0.5
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US-09-941-314-3

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US-09-941-314-2

US-09-941-314-14

US-09-941-314-14

US-09-941-314-13

US-09-941-314-13

US-09-941-314-13

US-09-941-314-13

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US-09-941-314-12

US-09-941-314-12

US-09-941-314-12

US-09-941-314-12

US-09-941-314-12

US-10-06-467-2

US-10-08-467-2

US-10-08-849-303-15
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Similarity 100.0%; Similarity 100.0%; O; Conservative 0 QYNKESDDKYHFRIFRVLKV QYNKESDDKYHFRIFRVLKV	4-15 5, Application US20020142396A FORMATION: 1		₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩
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SCORE 446; DB 9; L Pred. No. 4.1e-46; ; Mismatches 0; ; Mismatches 0;]	Y41314 Cystatin-8 and Its Us ancer Procoagulant Privolation 14 29 29 20,230 Version 4.0	ALIGNMENTS	US-09-969-834-4 US-08-849-303-19 US-08-849-303-17 US-09-969-834-3 US-09-969-834-3 US-09-969-834-3 US-09-969-834-3 US-09-969-834-3 US-09-969-834-3 US-09-9775-932-8 US-08-849-303-24 US-09-964-0497-6 US-10-376-564-46 US-10-376-564-46 US-10-376-564-68 US-10-376-564-69 US-10-376-564-18 US-08-849-303-18 US-09-941-314-11 US-09-941-314-9 US-09-941-314-8 US-09-941-398-141 US-10-257-174-42
ength 80; Indels 0; Gaps 0; QKPETTNCVPQERELHKQV 60)		Sequence 4, Appli Sequence 19, Appli Sequence 19, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 3, Appli Sequence 47, Appli Sequence 6, Appli Sequence 6, Appli Sequence 6, Appli Sequence 240, Appl Sequence 260, Appl Sequence 5, Appli Sequence 5, Appli Sequence 11, Appl Sequence 5, Appli Sequence 9, Appli Sequence 9, Appli Sequence 24, Appli Sequence 5, Appli Sequence 6, Appli Sequence 11, Appli Sequence 7, Appli Sequence 14, Appli Sequence 14, Appli Sequence 17, Appli Sequence 14, Appli

RESULT 2 US-09-941-314-3 ; Sequence 3, Application US/09941314 ; Patent No. US20020142396A1

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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Inhibit Cancer Procoagulant Pro
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
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Best Local S
Matches 80
                Sequence 2, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its!
TITLE OF INVENTION: Inhibit Cancer Procoagulant
TITLE OF INVENTION: Inhibit Cancer Procoagulant
TITLE OF INVENTION: INDIBER: US/09/941,314
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
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LENGTH: 115
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Patent No. US20020142396A1
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FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 117
TYPE: PRT
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                h 100.0%; Score 446; DB 9; Similarity 100.0%; Pred. No. 6.4e-46; 80; Conservative 0; Mismatches 0;
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00-81PC
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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 09/230,230
PRIOR APPLICATION UNMBER: 09/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14
LENGTH: 52
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
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CURRENT FILING DATE: 2001-08-29
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16
LENGTH: 59
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US-09-941-314-16
                                                                                                                                                                                                                                                              Sequence 14, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
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Best Local Similarity 100.0%; P
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Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  22 RQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKFETTNCVPQERELHKQV
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100.0%; Pred. No. 7.7e-46;
vative 0; Mismatches 0;
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100.0%; Pred. No. 9.2e-33;
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; ORGANISM: Homo sapiens US-09-941-314-14

Local Similarity nes 52; Conserv

64.6%; So ilarity 100.0%; I Conservative 0;

Score 288; Pred. No. Mismatches

2.8e-27; DB 9;

Length 52;

Indels

0

Gaps

0

8

KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 55 KESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 52

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US-09-941-314-17

Application US/09941314

GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc. Sequence 17, Application U Patent No. US20020142396A1

TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Inhibit Cancer Procoagulant Proteir FILE REFERENCE: 00-81PC

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                                                                                                                                                 ; LENGTH: 49
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-13
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Patent No. US20020142396A1
                                                                       Matches
                                                                                                           Query Match
                                                                                                                                                                                                                             SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: 00-81PC
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protei
                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                     Local
                                 1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN 48
                                                                       h 59.6%; So Similarity 100.0%; I 48; Conservative 0;
 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN 49
                                                                       Score 266; DB 9; I
Pred. No. 1.2e-24;
0; Mismatches 0;
                                                                                                             Length 49;
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FILE REFERENCE: 99-104
CURRENT APPLICATION NUMBER: US/09/740,638
CURRENT FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2

RESULT 9

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33 NVEMOWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 80

1 NVEMONTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 48

Matches

48;

Conservative

61.2%; Score 273; DB 9; I 100.0%; Pred. No. 1.6e-25; tive 0; Mismatches 0;

Length 48

Indels

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Gaps

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Query Match Best Local Similarity

TYPE: PRT
ORGANISM: Homo sapiens
US-09-941-314-17

LENGTH: 48

SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 17

CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19

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Query Match
Best Local Similarity
Watches 33; Conserva
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US-09-740-638-2
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US-09-941-314-12
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US-09-941-314-12
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Sequence 2, Application US/09740638
Patent No. US20020006656A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: Zcys5: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
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SEQ ID NO 10
LENGTH: 46
TYPE: PRT
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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version SEQ ID NO 12
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CURRENT FILING DATE: 2001-08-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
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100.0%; Pr.
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RESULT 13
US-10-235-148-2
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                                                                                                                                                                           Sequence 2, Application US/10235148
Publication No. US20030100096A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104C1
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SEQ ID NO
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Best Local Similarity
                                 CURRENT APPLICATION NUMBER: US/10/235,148
CURRENT FILING DATE: 2002-09-04
PRIOR APPLICATION NUMBER: 60/172,119
PRIOR FILING DATE: 1999-12-23
PRIOR APPLICATION NUMBER: 09/740,638
PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
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PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version
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CURRENT FILING DATE: 2001-12-04
PRIOR APPLICATION NUMBER: 60/172,119
PRIOR FILING DATE: 1999-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Holloway, James L.
TITLE OF INVENTION: Zcys5: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
                  SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 99-104C
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                                                                                                                                                                                                                                                                                                                                                                                                                                             60 VNCFFSVFAVPWFEQYKILN 79
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SOFTWARE: Pact
SEQ ID NO 16
TRNGTH: 116
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Patent No. US20020137671A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                    Sequence 15, Application US/08849303 Publication No. US20030221209A1 GENERAL INFORMATION:
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COUNTRAL.
ZIP: 07601
ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
TWOTTER: TRM PC-DOS/MS-DOS
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CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Universi
TITLE OF INVENTION:
FILE REFERENCE: 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                  STREET: 411...
STREET: Hackensack
CITY: Hackensack
STATE: New Jersey
                                                                                                                                                                                      NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Klauber & Jackson
                                                                                                                                                                                                                                           APPLICANT: McPherson, Michael J.
APPLICANT: Urwin, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
                                                                                                                                                                                                                                                                                                     APPLICANT:
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Local Similarity 33.8%; Pred. No. 4.3e-11;
nes 27; Conservative 24; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 34.6%;
Local Similarity 38.3%;
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                                                                                                                                                                       411 Hackensack Avenue,
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Pred. No. 8.8e-11;
.7; Mismatches 30
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SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA;
APPLICATION UNMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION UNMBER: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION UNMBER: 52,742
REFERENCE/DOCKET NUMBER: 53,742
REFERENCE/DOCKET NUMBER: 53,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEPAX: 201-341-1644
TELEPAX: 201-341-1644
TELEPAX: 13521
INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acid
STRANDEDNESS: single
TYPE: amino acid
STRANDEDNESS: single
TYPE: monico acid
STRANDEDNESS: single
TYPE: protein
US-08-949-303-15
Query Match
Best Local Similarity 38.3%; pred. No. 1.1e-10;
Matches 31; Conservative 17; Mismatches 30; Indels 3; Gaps
Query Match
Sept Local Similarity 38.3%; pred. No. 1.1e-10;
Matches 31; Conservative 17; Mismatches 30; Indels 57
Db 54 EYRRANDENCESSRVIRVISAKRQLVSGIKYILQVEIGRTTCPKSSGDLQSCEPHDEPEMA 113
Qy 58 KQVNCPFSVPAVPWPEQYKIL 78
Db 114 KYTTCTFVVYSIPMLNQIKLL 134
Search completed: March 23, 2004, 17:17:52
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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
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Perfect score:
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   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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length: 2000000000
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Query
Match
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446
1 QYNKESDDKYHFRI
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Gapop 10.0 , Gapext 0.5
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                      QYNKESDDKYHFRIFRVLKV.....NCFFSVFAVPWFEQYKILNK 80
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Copyright (c) 1993 - 2004 Compugen Ltd
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cystatin C - rat
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cystatin S precurs
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cystatin - bovine
cystatin - puff ad
cystatin D precurs
cystatin Precurs
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kininogen, HWW II
kininogen, LWW pre
kininogen, LWW pre
kininogen, HWW II
cystatin Precursor
major acute
T-kininogen, LWW I
cystatin precursor
major acute
T-kininogen, LWW I
cystatin precursor
major acute
T-kininogen, LWW I
T-kininogen, LWW I
T-kininogen, LWW I
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60	60	61	62	62	62.5	62.5	63	63	63	63.5	64	64.5	65	69	72
13.5	13.5	13.7	13.9	13.9	14.0	14.0	14.1	14.1	14.1	14.2	14.3	14.5	14.6	15.5	16.1
1658	257	555	602	602	1585	620	438	438	325	455	915	505	602	1779	423
N	N	N	N	N	N	N	Ŋ	N	N	N	-	N	N	N	-
T42642	T03724	T24671	S39782	869198	T19121	S55086	T52149	A47702	F69784	T15622	RDBHNH	T51403	A35564	T23130	KGRTM
phosphoinositide 3	C-type cyclin - ri	hypothetical prote	cyclooxygenase 1 -	prostaglandin G/H	probable protein-t	probable membrane	beta-gluconase [im	glucan 1,3-beta-gl	conserved hypothet	hypothetical prote	nitrate reductase	hypothetical prote	prostaglandin-endo	hypothetical prote	major acute phase

ALIGNMENTS

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RESULT 3
S10587
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C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor; egg white; phosphoprotein
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-139/Product: cystatin, long form #status experimental <CYLF>
F;30-139/Domain: cystatin homology <CYS>
F;32-139/Product: cystatin, short form #status experimental <CYSF>
F;32-139/Product: cystatin, short form #status experimental <CYSF>
F;76-80/Region: inhibitory #status predicted
F;94-104,118-138/Disulfide bonds: #status experimental
F;103/Binding site: phosphate (Ser) (covalent) (partial) #status expe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M95725
A;Note: authors failed to translate the codon for residue 115-Tyr
C;Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: protein
A;Residues: 97-114 <LAB>
R;Colella, R.; Bird, J.W.C.

Gene 130, 175-181, 193
A;Title: Isolation and characterization of the chicken cystatin-encoding gene: Mapping
A;Reference number: JN0789; MUID:93366172; PMID:8359684
A;Accession: JN0789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Laber, B.; Kriegistein, K.; Henschen, A.; KOS, J.; Turk, V.; Huber, R.; Bode, FEBS Lett. 248, 162-168, 1989
A;Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein. A;Reference number: S04008; MUID:89252033; PMID:2721673
A;Accession: S04008
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R;Auerswald, E.A.; Naegler, D.K.; Schulze, A.J.; Engh, R.A.; Genenger, G.; Machleidt, W. Bur. J. Blochem. 224, 407-415, 1994
A;Title: Production, inhibitory activity, folding and conformational analysis of an N-to A;Reference number: S48159; MUID:95010016; PMID:7925354
A;Accession: S48159
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A; Residues: 24-139 <SCH>
A; Residues: 24-139 <SCH>
R; Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W.
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
A; Title: Protein inhibitors of cysteine proteins as a lil. Amino-acid sequence of cystati
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A;Reference number: A37514; MUID:83256421; PMID:6409085
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A; Residues: 24-139 < TUR>
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                                                                                                                                                                                                                                                                                                                                              QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP--ETTNC-VPQERELH 57
                                                                                                                                                                                                                        KQVNCFFSVFAVPWFEQYKIL 78
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                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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38.3%; Pred. No. 4.4e-10;
tive 17; Mismatches 30
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #text_change 16-Jul-1999
C;Accession: S07085; S01337; S21109
R;Cole, T:, Dickson, P.W; Esnard, F:, Averill, S:, Risbridger, G.P.; Gauthier, Eur. J. Biochem. 186, 35-42, 1989
A;Title: The cDNA structure and expression analysis of the genes for the cysteir A;Reference number: S07085; MUID:90092122; PMID:2689174
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R;Esnard, F; Esnard, A.; Faucher, D.; Capony, J.P.; Derancourt, J.; Brillard, M.; Gauth)
Biol. Chem. Hoppe-Seyler 371(Suppl.), 161-166, 1990
Biol. Chem. Hoppe-Seyler 371(Suppl.), 161-166, 1990
A;Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosylat
A;Reference number: S10587; MUID:90380276; PMID:2400577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:X16957; NID:g56041; PIDN:CAA34831.1; PID:g736290 R;Esnard, A.; Esnard, F.; Faucher, D.; Gauthier, F. FEBS Lett. 236, 475-478, 1988
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A;Note: the sequence from Fig. 2 is inconsistent with that from Fig.
C;Superfamily: cystatin; cystatin homology
F;9-120/Domain: cystatin homology <CYS>
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A;Molecule type: protein
A;Residues: 1-120 <ESN>
                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 8,'XX',11-20 <ES2>
C;Superfamily: cystatin; cystatin homology
C;Keywords: Cysteine proteinase inhibitor
F;16-127/Domain; cystatin homology <CYS>
                                                                                                                                                                                                                                                                                                                                                           FBBS Lett. 300, 131-135, 1992
A;Title: Production of the cysteine proteinase inhibitor cystatin A;Reference number: S21109; MUID:92225121; PMID:1563513
A;Accession: S21109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Two rat homologues of human cystatin C. A;Reference number: S01337; MUID:88313020; PMID:3044831 A;Accession: S01337
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A; Residues: 1-127 < COL>
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A;Residues: 8-49 <ESN>
R;Esnard, A; Esnard, F;; Guillou,
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Best Local
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;Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
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SYNKGSNDAYHSRAIQVVRARKQLVAGINYYLDVEMGRTTCTKSQTNLTNCPFHDQPHLM
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Pred. No. 8.6e
18; Mismatches
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Pred. No. 8.1e-10;
8; Mismatches 24
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R; Saltch, E.; Sabatini, L.M.; Eddy, R.L.; Shows, T.B.; Azen, E.A.; Isemura, S.; Sanada, B; Cochem. Biophys. Res. Commun. 162, 1324-1331, 1989

A; Title: The human cystatin C gene (CST3) is a member of the cystatin gene family which A; Reference number: A33400; MUID:89350949; PMID:2764935

A; Residues: 1-24, T., 26-146 <SAI>A; Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:g181385; PIDN:AAA52164.1; PID:g R; Ghiso, J.; Cowan, N.; Frangione, B.

Biol. Chem. Hoppe-Seyler 369, 205-208, 1988

A; Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron A; Reference number: S02751

A; Mccession: S02751

A; Mclecule type: DNA

A; Residues: B-119 <GH2>

A; Cross-references: EMBL:M27769

A; Cross-reference number: A01270; MUID:82222268; PMID:6283552

A; Accession: A01270

A; MCCession: A01270

A; MUID:82222268; PMID:6283552
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A;Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738
A;Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738
A;Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738
A;Cross-reference in Celandic patients with hereditary amyloid angiopathy is related to the content of th
                                                                                                                                                             A;Molecule type: protein
A;Residues: 37-93,'Q','95-146 <GHI>
R;Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart,
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
A;Title: Protein inhibitors of cysteine proteinages. III. Amino-acid se
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A; Residues: 27-131, 75, 133-146 < GRU>
A; Residues: 27-131, 75, 133-146 < GRU>
R; Ghiso, J.; Jensson, O.; Frangione, B.
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
A; Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis
A; Reference number: A25434, MUID:86206076; PMID:3517880
A; Accession: A25434
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C;Date: 06-Jul-1982 #sequence revision 31-Mar-1991 #text change 08-Dec-2000
C;Date: 06-Jul-1982 #sequence revision 31-Mar-1991 #text change 08-Dec-2000
C;Accession: S10216; S00004; JL0095; A33400; S02751; A01270; A25434; S12288; A32732; A60
C;Accession: S10216; S00004; JL0095; A33400; S02751; A01270; A25434; S12288; A32732; A60
R;Abrahamson, M.; Olafsson, I.; Palsdottir, A.; Ulvsbaeck, M.; Lundwall, A.; Jensson, O.
Biochem. J. 268, 287-294, 1990
A;Title: Structure and expression of the human cystatin C gene.
A;Reference number: S10216; MUID:90303202; PMID:2363674
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                                                                  A; Reference number: S01461; MUID:84110059; A; Accession: S12288
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;Residues: 1-146 <AB
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                                                                                                                                                                                                                                                                                             U.; Machleidt,
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A;Status: preliming.

A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein is found in the post-gamma-globulin fraction of c;Comment: This protein is found in the post-gamma-globulin fraction of c;Comment: This protein autoimmune diseases.
C;Comment: This protein is an inhibitor of cysteine proteinases and may c;Comment: This protein is an inhibitor of cysteine proteinases and may c;C;Comment: This protein is an inhibitor of cysteine proteinases and may c;C;Comment: This protein is an inhibitor of cysteine proteinases and may c;C;Comment: This protein is an inhibitor of cysteine proteinases and may c;C;Comment: This protein is an inhibitor of cysteine proteinases and may c;C;Comment: This protein is an inhibitor of cysteine proteinases.
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A;Map position: 20p11.2-20p11.2
A;Introns: 81/3; 119/3
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A;Contents: annotation; disulfide bonds
R;Berti, P.J.; Storer, A.C.
Biochem, J. 302, 411-416, 1994
A;Title: Local pH-dependent conformational changes leading to proteolytic susceptibility
A;Reference number: S55305; MUID:94379969; PMID:8092991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A,Experimental source: urine, kidney dise A,Note: truncated forms with amino ends a R;Grubb, A.; Lofberg, H.; Barrett, A.J. FEBS Lett. 170, 370-374, 1984
A,Title: The disulphide bridges of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Note: this protein, purified from cerebrospinal fluid of patients with the aut e defective gene is not present in CSF but is found instead in amyloid deposits R;Popovic, T; Brzin, J.; Ritonja, A.; Turk, V. Biol. Chem. Hoppe-Seyler 371, 575-580, 1990
A;Title: Different forms of human cystatin C. A;Reference number: $10607; MUID:91025625; PMID:2222856
A;Accession: $10607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensson, O Scand. J. Clin. Lab. Invest. 50, 85-93, 1990
A;Title: The amino terminal portion of cerebrospinal fluid A;Reference number: A60552; MUID:90193615; PMID:2315647
A;Accession: A60552
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Biochem. Biophys. Res. Commun. 118, 103-109, 1984
A;Title: Human cystatin, a new protein inhibitor of cysteine proteinases.
A;Reference number: A32732; MUID:84128015; PMID:6365094
A;Accession: A32732
                                                                                                                                                                                                                                                                                                                           F;81-85/Region: inhibitory #status predicted F;29/Modified site: hydroxyproline (Pro) (partial) #status F;99-109,123-143/Disulfide bonds: #status experimental
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A; Residues: 27-49, 'XX', 52-64 <OLA>
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A;Residues: 27-53 <POP>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Superfamily: cystatin; cystatin homology
;Keywords: amyloid; cysteine proteinase inhibitor; extracellular protein; hydroxyproline
;L-26/Domain: signal sequence #status predicted <SIG>
;27-146/Product: cystatin C #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                              ;35-146/Domain: cystatin homology <CYS:
                                                                                                                                                                                                                                  Query Match
Best Local
                                                                    59
                                                                                                                                                                                                                              Similarity
                                                                                                                 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC-VPQERELH 57
KOVNCFFSVFAVPW 71
                                                                 EYNKASNOMYHSRALQVVRARKQIVAGVNYPLOVELGRTTCTKTQPNLDNCPFHDQPHLK 118
                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                            Score 145.5; DB 1
Pred. No. 4.7e-09;
6; Mismatches 27
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precursor -

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A;Title: Human cystein-proteinase inhibitors: nucleotide sequence analysis of three mem A;Teference number: A91589; MUID:88185836; PMID:3446578
A;Accession: B29632
A;Molecule type: DNA
A;Residues: 1-141 <SAI-
A;Cession: B29632
A;Molecule type: DNA
A;Residues: 1-141 <SAI-
A;Cession: B29632
A;Molecule type: DNA
A;Residues: 1-141 <SAI-
A;Cession: Signada, K.; Kim, H.S.; Smithles, O.; Maeda, N.
Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
A;Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily
A;Reference number: S02489; MUID:89076505; PMID:3202964
A;Accession: A41422; MUID:89076505; PMID:3202964
A;Accession: A41422; MUID:89076505; PMID:3436950
A;Accession: A41422; MUID:89076505; PMID:3436950
A;Accession: A41422; MUID:88139220; PMID:3436950
A;Accession: A41422; MUID:88139220; PMID:3436950
A;Accession: A27015
A;Accession: B27015
A;Accession: B270
R;Solem, M.; Rawson, C.; Lindburg, K.; Barnes, D.
Blochem. Biophys. Res. Commun. 172, 945-951, 1990
A;Title: Transforming growth factor beta regulates cystatin C in serum-free A;Reference number: A36163; MUID:91054522; PMID:2241983
A;Accession: A36163
A;Accession: A96163
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-140 <SOL>
A;Cross-references: EMBL:M59470; NID:g192911; PIDN:AAA63298.1; PID:g192912
C;Superfamily: cystatin homology
F;29-140/Jomain: cystatin homology <CVS>
F;93-103,117-137/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cystatin C precursor - mouse
CySpecies: Mus musculus (house mouse)
CyDate: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change
CyAccession: A36163
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C;Date: 31-Mar-1989 #sequence revision 30-Jun-1989 #text_change 16-Jul-1999
C;Accession: B29632; S02490; Ā41422; B27015
C;Accession: B29632; S02490; Ā41422; B27015
R;Saitch, E.; Kim, H.S.; Smithies, O.; Maeda, N.
Gene 61, 329-338, 1987
Gene 61, 329-338, 1987
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C;Superfamily: cystatin; cystatin homology
F;30-141/Domain: cystatin homology <CYS>
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C;Genetics:
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Best Local
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32.9%; Pred. No. 5.8e-09;
tive 21; Mismatches 31
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                                                                                                                                                                                                                                                                                                                                                                                                       serum-free mouse embryo
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A;Status: preliminary
A;Molecule type: protein
A;Residues: 21-134,'D',136-141 < IHU>
R;Isemura, S.; Saitoh, E.; Sanada, K.
J. Biochem. 96, 489-498, 1984
A;Title: Isolation and amino acid sequence
A;Reference number: A91985; MUID:85054716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 1-112 <HIR>
C;Superfamily: cystatin; cystatin homology
C;Keywords: colostrum; cysteine proteinase inhibitor
C;Keywords: colostrum; cysteine proteinase inhibitor
F;2-112/Domain: cystatin homology <CYS>
F;48-52/Region: Inhibitory #status predicted
F;66-76,90-110/Disulfide bonds: #status predicted
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A;Title: Complete amino acid sequence of bovine colostrum low-M-r A;Reference number: A01271; MUID:85231205; PMID:3891407
A;Accession: A01271
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R;Hirado, M.; Tsunasawa, S.; Sakiyama, F.; Niinobe, M.; Fujii, FBBS Lett. 186, 41-45, 1985
                                                                                                                                                                                                            R;Lamkin, M.S.; Jensen, J.L.; Sétayesh, M.R.; Troxler, R.F.; Oppenheim, F.G. Arch. Biochem. Blophys. 288, 664-670, 1991
A;Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel A;Reference number: S16500; MUID:91378515; PMID:1898055
                                                                                                                                                                                                                                                                                                                                                                                                                 R;Bobek, L.A.; Aguirre, A.; Levine, M.J.
Biochem. J. 278, 627-635, 1991
A;Title: Human salivary cystatin S. Cloning, sequence analysis,
A;Reference number: S17667; MUID:91378918; PMID:1898352
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A; Residues: 1-141 <BOB>
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                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:X54667; NID:g30365; PIDN:CAA38478.1; PID:g30366
R;Lamkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim,
                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S17667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N; Alternate names: cystatin SA-III; salivary acidic protein-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cystatin S precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                          A;Accession: S16500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Species: Homo sapiens (man)

Date: 25-Feb-1985 #sequence revision 08-Feb-1996 #text change;

Accession: S17667; S15500; A01272; A29603; S19280; A56608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Alternate names: thiol proteinase inhibitor;Species: Bos primigenius taurus (cattle);Date: 28-Feb-1986 #sequence_revision 28-Feb-1986 #text_change 06-Dec-1996;Date: 28-Feb-1986 #sequence_revision 28-Feb-1986 #text_change 06-Dec-1996
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bovine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 KQVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 EFNKRSNDAYQSRVVRVVRARKQVVSGMNYFLDVELGRTTCTKSQANLDSCPFHNQPHLK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26;
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Pred. No. 7.7e-08;
9; Mismatches 33;
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Pred. No. 2.7e-08;
B; Mismatches 26;
          of SP-1, an PMID:6501254
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                                     acidic protein of human whole
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A;Map position: 20p11.2-20p11.2
(;Superfamily: cystatin; cystatin homology
C;Keywords: cystatin; cystatin homology
C;Keywords: cystains sequence #status predicted <SIGs
F;1-20/Domain: signal sequence #status predicted <MATs
F;21-141/Product: cystatin S #status predicted <MATs
F;30-141/Domain: cystatin homology <CYSs
F;66-80/Region: inhibitory #status predicted
F;94-104;118-138/Disulfide bonds: #status predicted
                                                                                cystatin SN precursor [validated] - human
N;Alternate names: cystatin SA-I
C;Species: Homo sapiens (man)
C;Date: 28-May-1986 #sequence revision 08-Feb-1996 #text_change
C;Accession: A28110; S02489; A29632; A01273; S19279
R;Al-Hashimi, I.; Dickinson, D.P.; Levine, M.J.
J. Biol. Chem. 263, 9381-9387, 1988
A;Title: Purification, molecular cloning, and sequencing of sali
A;Reference number: A28110; MUID:88243825; PMID:2837486
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A;Note: authors desigate form without phosphate as cystatin S and form containing one phoc. C;Comment: This protein strongly inhibits papain and ficin, partially inhibits stem brown
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R;Johnsson, M.; Richardson, C.F.; Bergey, E.J.; Levine, M.J.; N.
Arch. Oral Biol. 36, 631-636, 1991
A;Title: The effects of human salivary cystatins and statherin A;Reference number: A56608; MUID:92074898; PMID:1741693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Cystatin S: a cysteine proteinase inhibitor of human A;Reference number: A91981; MUID:85104877; PMID:6394600 A;Contents: annotation; inhibitor specificity A;Contents: Biochem, F.M.; Wilson, K.J.; Hunkapiller, M.W. Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987 A;Title: Identification of a long form of cystatin from human A;Reference number: A29603; MUID:87270697; PMID:3496880
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A;Molecule type: protein
A;Residues: 29-134,'D',136-141 <ISE>
R;Isemura, S.; Saltoh, E.; Ito, S.; Isemura, M.; Sanada,
J. Biochem. 96, 1311-1314, 1984
A;Accession: A28110
A;Molecule type: mRNA
A;Residues: 1-141 <ALH>
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A;Gene: GDB:CST4
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A; Residues: 21-51 < AMA;
R; Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.
Biochem. J. 280, 341-352, 1991
A; Title: Large-scale purification and characterization of the major phosphoproteins and A; Reference number: S19279; MUID:92082469; PMID:1747107
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A;Molecule type: protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCVPQER-ELH 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
27; Conserv
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Pred. No. 1.6e
19; Mismatches
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A;Map position: 20p11.2-20p11.2
C;Superfamily: cystatin, cystatin homology
C;Superfamily: cystatin, cystatin homology
C;Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-141/Product: cystatin SA-I #status experimental <MAT1>
F;39-141/Product: cystatin SN #status experimental <MAT2>
F;30-141/Domain: cystatin homology <CYS>
F;76-80/Region: inhibitory #status predicted
F;94-104,118-138/Disulfide bonds: #status predicted
                                                        Biochem. J. 246, 799-802, 1987
A;Title: Amino acid sequence of a cystatin
A;Reference number: A28793; MUID:88076861;
A;Accession: A28793
                                                                                                                                                                                                                                                                      cystatin -
C;Species:
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A;Nolecule type: protein
A;Residues: 29-141 <ISB>
A;Residues: 29-141 <ISB>
A;Residues: 29-141 <ISB>
B;Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, B;Ramasubbu, N.; 41-352, 1991
Biochem. J. 280, 341-352, 1991
A;Title: Large-scale purification and characterization of the major A;Reference number: S19279; MUID:92082469; PMID:1747107
A;Accession: S19279
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R;Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
Gene 61, 329-338, 1987
A;Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three
A;Reference number: A91589; MUID:88185836; PMID:3446578
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A; Molecule type: protein A; Residues: 1-111 < RIT>
                                                                                                                                               R;Ritonja, A.; Evans, H.J.; Machleidt, W.; Biochem. J. 246, 799-802, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene: GDB: CST1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Comment: Human saliva appears to contain several cysteine proteinase inhibitors that an ences. Cystatin SN, with a pI of 7.5, is a much better inhibitor of papain and dipeptidyl
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A;Molecule type: protein
A;Residues: 21-55 <RAM>
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FEBS Lett. 198, 145-149, 1986
A;Title: Characterization of a new cysteine proteinase inhibitor
A;Reference number: A01273; MUID:86164938; PMID:3514272
                                                                                                                                                                                                                                                                                                                                  A28793
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A;Map position: 20p11.2-20p11.2
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A; Residues: 1-86, 'I', 88-141 <SAI>
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                                                                                                                                                                                                                                 ystatin - puff adder
;Species: Bitis arietans (puff adder)
;Date: 15-Dec-1988 #sequence_revision
                                                                                                                                                                                                              Accession: A28793;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KOVNCFFSVFAVPW 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EYNKATKDDYYRRPLRVLRARQQTVGGVNYFFDVEVGRTICTKSQPNLDTCAFHEQPELQ 113
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Pred. No. 7.7e-07;
3; Mismatches 31;
                                                                                                                                                                                                                                    15-Dec-1988 #text_change 30-Sep-1993
                                                                                    from venom of PMID:3500714
                                                                                                                                                                            Barrett,
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                                                                                                                   African puff adder
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C;Species: Oncorhynchus keta (chum salmon)
C;Date: 14-Jul-1994 #sequence_revision 14-
C;Accession: JC2040
R;Koide, Y:; Noso, T.
Biosci. Biotechnol. Biochem. 58, 164-169,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GDB:136380; OMIM:123858
A;Map position: 20p1.21-20p11.21
A;Introns: 77/3; 115/3
C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor;
F;1-20/Domain: signal sequence #status pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-45,'C',47-142 <FR2>
A;Crose-references: EMBL:X59964; NID:g30263; PIDN:CAA42590.1; PID:g30264
C;Genetics:
C;Genetics:
A;Gene: GDB:CST5
Biosci. Biotechnol. Biochem. 58, 164-169, 1994
A; Title: The complete amino acid sequence of pituitary cystatin
A; Reference number: JC2040; MUID:94162738; PMID:7764512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711 A;Otoe: single residue difference between this report and S18218 was invote; Freije, J.D.; Abrahamson, M.; Olafsson, I.; Velasco, G.; Grubb, A.; Loj J. Biol. Chem. 266, 20538-20543, 1991 J. Biol. Chem. 266, 20538-20543, 1991 A;Title: Structure and expression of the gene encoding cystatin D, a novota; Reference number: S18212; MUID:92041895; PMID:1939105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cystatin D precursor - human cystatin D precursor - human cyspecies: Homo gapiens (man) C;Date: 03-May-1994 #sequence revision 03-May-1994 #text_change 16-Jul-1999 C;Accession: A47142; S18212
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Freije, J.P.; Balbin, M.; Abrahamson, M.; Velasco, G.; Dalboge, H.; Grubb, A.; Lopez-(J. Biol. Chem. 268, 15737-15744, 1993
A;Title: Human cystatin D. cDNA cloning, characterization of the Escherichia coli express A;Reference number: A47142; MUID:93340179; PMID:8340398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
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                                                                                                                                                                               N; Alternate names: cysteine proteinase inhibitor
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A; Residues: 1-142 < FRE>
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Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Superfamily: cystatin; cystatin homology; kgywords: cystaine proteinase inhibitor; extrac; kgywords: cystaine proteinase tactus predicted; 1-20/Domain: signal sequence #status predicted; 30-142/Domain: cystatin homology <CYS>
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27; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QYNKE-SDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNC-VPQEREL 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PENQ-QEEITCRFEVWSRPW 103
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                                                                                                                                                                                                                                                                                                                                                                                                                                     EYNKVINKDEYYSRPLQVMAAYQQIVGGVNYYFNVKFGRTTCTKSQPNLDNCPFNDQPKL
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32.5%;
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Pred. No. 1.1e-06;
9; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 118; DB 2;
Pred. No. 5.3e-06;
8; Mismatches 34
                                                                                                                        14-Jul-1994 #text_change 16-Jul-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 142
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                               salmon.
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A;Molecule type: protein
A;Residues: 28-113, 'QE', 116-141 <BED>
A;Residues: 28-113, 'QE', 116-141 <BED>
A;Residues: 28-113, 'QE', 116-141 <BED>
A;Rote: 87-Glu and 88-His were also found; disulfide bonds determined
A;Nishiura, T.; Ishibashi, K.; Abe, K.
Biochim. Biophys. Acta 1077, 346-354, 1991
A;Title: Isolation of three forms of cystatin from submandibular saliva
A;Reference number: S15132; MUID:91230145; PMID:1903068
A;Accession: S15132
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C;Keywords: cystèine proteinase inhibitor 7;1-28/Domain: signal sequence #status predicted <SIG>F;28-141/Product: cystatin S #status experimental <MAT>F;29-141/Product: cystatin S, form RSC-3 #status predicted F;30-141/Domain: cystatin homology <CYS>F;30-141/Product: cystatin S, form RSC-2 #status predicted F;31-141/Product: cystatin S, form RSC-1 #status predicted F;32-141/Product: cystatin S, form RSC-1 #status predicted F;94-104,118-138/Disulfide bonds: #status experimental
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R;Cox, J.L.; Shaw, P.A.;
Gene 110, 175-180, 1992
A;Title: Structure, organizat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Amino acid sequence of an inducible cysteine proteinase inhibitor (cystatin) A;Reference number: S05252; MUID:89334379; PMID:2757396
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A;Molecule type: mRNA
A;Residues: 'ISTDYLYISFEHETLSC',27-141 <SHA>
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                                                                                                                                                                                                                                                                                                                                                                                                                    A; Introns: 76/3; 114/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: protein
A;Residues: 29-38;76-80 <BIO>
A;Note: forms RSC-1, RSC-2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Accession: S05252
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A;Residues: 1-141 <COX>
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;Species: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 16-Jul-1999
;Accession: JQ1470; A31891; S05252; S15132
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Gene: CysS
                                                                                                                                                                                                                                                                                                                                                                          ;Superfamily: cystatin;
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26.2%;
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A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-132 <YAM>
A;Cross-references: DDBJ:D86628
A;Cross-references: DDBJ:D86628
A;Experimental source: liver
C;Comment: This protein is a homolog of mammalian cystatin C, and acts as an extracellul C;Superfamily: cystatin; cystatin homology
C;Keywords: liver
F;1-21/Domain: signal sequence #status predicted <SIG>
F;23-132/Domain: cystatin homology <CYS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cystatin precursor - chum salmon
(;Species: Oncorhynchus keta (chum salmon)
(;Date: 26-Sep-1996 #sequence_revision 01-Nov-1996 #text_change 21-Jan-2000
(;Accession: JC4918
R;Yamashita, M.; Konagaya, S.
J. Biochem. 120, 483-487, 1996
A;Title: Molecular cloning and gene expression of chum salmon cystatin.
A;Reference number: JC4918; MUID:97058289; PMID:8902609
A;Accession: JC4918
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Search completed: March 23, 2004, 17:14:31 Job time: 15.728 secs
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                                                                                                            107 PYKCTFEVWSRPWMSDIQMV 126
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                                                                                                                                                            59 QVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                                                    47 EHNKKTNDMFVRQVAKVVNAQKQVVSGMKYIFTVQMGRTPCRKGGVEKICSVHKDPQMAV 106
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Maximum Match 100%
Listing first 45 summaries
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"The CRES gene: a unique testis-regulated gene related family is highly restricted in its expression to the proof the mouse epididymis.";

Mol. Endocrinol. 6:1653-1664(1992).

-I- FUNCTION: Performs a specialized role during sperm
                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-C3H, and CD-1;
MEDLINE-99247899; PubMed=10229662;
Cornwall G.A., Haia N., Sutton H.G.;
"Structure, alternative splicing and chromosomal localization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1993 (Rel. 27, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Cystatin-related epididymal spermatogenic protein
related epididymal specific protein) (Cystatin 8).
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                                                                                                                                                                                                                                      cystatin-related epididymal spermatogenic gene."; Biochem. J. 340:85-93(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOUSE
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-!- SUBCELLULAR LOCATION: S
-!- SIMILARITY: Belongs to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CST8 OR CRES.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
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SMART; SM00043; CY; 1.
                                                                                                                                         TISSUE=Epididymis;
MEDLINE=93078799; PubMed=1280328;
                                                                                                                                                                                       SEQUENCE OF 4-142 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
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PROSITE; PS00287; CYSTATIN; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1925490; Cst11.
                                                                                                              Cornwall G.A., Orgebin-Crist M.-C.,
                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090
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P01034; 1G96.
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139
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62.3%;
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the cystatin family.
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CYSTATIN 11.
CYSTATIN 11.
SECONDARY AREA OF CC
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCMAC.
W; F228D9815FA32640 C
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Pred. No. 3.2e
L6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                Hann S.R.;
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hes 16;
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RESULT 4
CSTB RAT
ID CSTB RAT
AC 088969;
DT 30-MAY-2000 (
DT 10-OCT-2003 (
DT 10-OCT-2003 (
DT CYSTATIN-TELE
DE 8);
GN CSTB OR CRES.
OS RATTUS NOTVOS;
OC ENWANDAIIA; ENT
OX NCBI_TAXID=1(
RN [1]
RP SEQUENCE FROM
RC STRAIN=Sprag,
RX MEDLINE=9924;
RA CORNWALL
RT "STRUCTURE, (
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Best Local S
Matches 35
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CONFLICT
SEQUENCE
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DISULFID
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between
                        STRAIN=Sprague-Dawley; TISSUE=Epididymis; MEDLINE=99247899; PubMed=10229662; Cornwall G.A., Heia N., Sutton H.G.;
                                                                                                                                                       RACCUS NOTVEGICUS (Rat)
Eukaryota; Metazoa; Cho
Mammalia; Eutheria; Rod
NCRT Taurn
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EMBL;
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                                                                                                 SEQUENCE FROM N.A.
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SMART; SM00043; CY; 1.
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InterPro; IPR000010; Cystatin.
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HSSP; P01034; 1G96.
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SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower expression in the testis. Within the testis it is localized to the elongating spermatids, whereas within the epididymis it is exclusively synthesized by the proximal caput epithelium.
INDUCTION: Testicular factors or hormones other than androgens present in the testicular fluid may be involved in the regulation of CRES gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s SWISS-PROT entry is copyright. It is produced through a collab ween the Swiss Institute of Bioinformatics and the EWBL outst European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in ified and this statement is not removed. Usage by and for comitties requires a license agreement (See http://www.isb-sib.ch/an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of CRES gene expression.
SIMILARITY: Belongs to the cystatin family.
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protease inhibitor; POTENTIAL.
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    A., Hsia N.,
alternative
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(Rel. 39, Last sequence update
(Rel. 42, Last annotation upda
lated epididymal spermatogenic
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                                                                                                                                                                   Chordata;
Rodentia;
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  Sutton H. splicing
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SECONDARY AREA OF CONTACT (POTENTIAL SECONDARY AREA OF CONTACT (POTENTIAL)

BY SIMILARITY.

BY SIMILARITY.

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

PLMLSLILPIIP -> GTMDEQVGESQK (IN REI PLML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 199.5; DB 1;
Pred. No. 3.9e-16;
S; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
       and
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       chromosomal localization
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RESULT
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Best Local
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30-MAY-2000
28-FEB-2003
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DISULFID
CARBOHYD
Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baggule Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
                                                                                                                                                                                  Cornwall G.A., Hann S.R.;
"Transient appearance of CRES protein caput epididymal sperm maturation.";
Mol. Reprod. Dev. 41:37-46(1995).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochem. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cystatin-related epididymal spermatogenic gene."; Biochem. J. 340:85-93(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           060676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CST8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AF090692; AAC36317.1; -. HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                  MEDLINE=95344753; PubMed=7619504;
                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CST8 OR CRES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cystatin-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or send an email to license@isb-sib.ch).
                                                                                                                 MEDLINE=21638749; PubMed=11780052;
                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thiol
                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           interPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION:
SIMILARITY: Belongs to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      maturation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KKLSCSFLVGALPWNGEFDLLSK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KQVNCFFSVFAVPWPEQYKILNK 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EYNKGSEDKYLFLLDKTLHATLQITDRMEYHIDVQISRSNCRKPLNNTENCIPQKNPKLE 114
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95
119
100
142 AA;
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(Rel. 39, Last sequence update)
(Rel. 41, Last annotation update)
lated epididymal spermatogenic pro
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                                                                                                                                                                                                                                                                                                                                                                                                                                               (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Belongs to
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105
139
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                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SECONDARY AREA OF CONTACT (POTENTIAL)
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . .) (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 187.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CYSTATIN-RELATED PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FB873FAA6B6CAB34 CRC64;
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nes 23;
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       Carter N.P.,
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re D.M.,
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                                                                     C.L.
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Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
Caffind D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
A. Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
A. Huckle E., Hunt A.R., King A., Knights A., Laird G.K., Lawlor S.,
A. Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lowlor S.,
A. Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lowell J.D.,
A. Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
A. Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
A. Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
A. Milne S.A., Mistry D., Moore M.J.F., Plumb R.W., Ramsey H.,
A. Phillimore B.J.C.T., Prathallingam S.R., Plumb R.W., Ramsey H.,
A. Phillimore B.J.C.T., Prathallingam S.R., Showakeen R., Sims S.,
A. Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
A. Tracey A., Tromans A.C., Vaudin M., Wall M., Walliams L., Williams S.A.,
A. Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
A. Baran R.M., Way P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                                                                                                                                                                           Query Match
Best Local S
Matches 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genew; HGNC:2480; CST8.
GO; GO:0004869; F:cysteine pro
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The DNA sequence and comparative analysis of human chromosome 20."; Nature 414 \colon 865 - 871 \ (2001) .
                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P01034; 1G96

    -!- FUNCTION: Performs a specialized role during sperm development and

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TISSUE SPECIFICITY: Proximal caput region of the epididymis. Lower expression in the testis. Within the testis it is localized to the elongating spermatids, whereas within the epididymis it is exclusively synthesized by the proximal caput epithelium.

SIMILARITY: Belongs to the cystatin family.
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115
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protease inhibitor;
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                                                                                                                                                                                                                                                      Similarity
                                                                                                             SYNKESEDKYVFLVVKTLQAQLQVINLLEYLIDVBIARSDCRKPLSTNBICAIQENSKLK 114
                                                                                                                                                                QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTN--CVPQER-ELH 57
                                                     KOVNCFFSVFAVPWFEQYKILNK
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119
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                                                                                                                                                                                                                                                   39.1%;
                                                                                                                                                                                                                                                                                                                                            16275
                                                                                                                                                                                                                                                                                                                                            MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal; Polymorphism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protease inhibitor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN.
SECONDARY AREA OF CONTA
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . . )
                                                                                                                                                                                                                           Score 174.5; DB 1;
Pred. No. 3e-13;
2; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
                                                                                                                                                                                                                                                                                                                                                                       A -> P (in dbSNP:1054633)
/FTId=VAR_014527.
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R.E., Connor R.E., Corby N
man R., Dhami P.D., Dunn M.,
Fraser A., French L., Gar
                                                                                                                                                                                                                                                                                                                                            9A3512757E0F4ECD CRC64;
                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONTACT
                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
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                                                                                                                                                                                                                                                                                    142;
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RESULT 7
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CYTC_RABIT
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Best Local
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16-0CT-2001 (Rel. 40, Created)
16-0CT-2001 (Rel. 40, Last seq
28-FEB-2003 (Rel. 41, Last ann
Cystatin C precursor.
                                                        POIO38;
21-JUL-1986 (Rel. 01, Created)
01-OCT-1989 (Rel. 12, Last sequence updated)
28-FEB-2003 (Rel. 41, Last annotation upon the control of the control of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SITE
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ACT_SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Large scale isolation of osteoclast-specific genes method involving the preparation of a subtracted CD Genes Cells 3:459-475(1998).

-I- FUNCTION: This is a thiol proteinase inhibitor.
                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=98424349; Puk
Kobori M., Ikeda Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oryctolagus cuniculus (Rabbit).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AB009342; BAA
HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=Japanese white;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thiol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00031; cystatin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kawashima H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nterPro; IPR000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BILE
                                                                                                                                                                                                    CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease
                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00043; CY;
E; PS00287; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                         KOVNCFFSVFAVPWFEQYKIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                  QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC-VPQERELH 57
                                                                                                                                                                                                                                                                                                                 RKMLCSFEIYSVPWLNKISLL
                                                                                                                                                                                                                                                                                                                                                                                                        EYNKGSNDRYHSRALQVVRARRQIVSGVKYYLDVLIGRTTCTKTQTNLANCPFHDQPDLQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       148 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inhibitor;
                                                                                                                                                                                                    STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAA75921.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hite; TISSUE=Bone;
PubMed=9753427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYSTATIN;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16346
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.

CYSTATIN C.

CYSTATIN C.

REACTIVE SITE.

SECONDARY AREA OF CONTACT.

BY SIMILARITY.

BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 5e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 155.5; DB Pred. No. 5e-11;
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                                                                                                                                                                                                                                                                                                                                                           78
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
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                                                                                                             update)
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                         Phasianinae;
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of cystatin from c
Hoppe-Seyler's Z. [4]
                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                     Dieckmann T., Mitschang L., Hofmann M., Kos J., Turk V.,
Auerswald E.A., Jeanicke R., Oschkinat H.;
"The structures of native phosphorylated chicken cystatin and of a
recombinant unphosphorylated variant in solution.";
J. Mol. Biol. 234:1048-1059(1993).
-I-FUNCTION: This protein binds tightly to and inhibits a variety
thiol proteases including ficin, papain, and cathepsins B, C, H
and L. Although isolated from egg white, it is also present in
                                                                                                                                                                                                                                                                                                                                                                                                                        Brzin J., Kos J., Turk V.;
"The 2.0 A X-ray crystal structure of chicken egg white cystatin its possible mode of interaction with cysteine proteinases.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Anastasi A., Brown M.A., Kembhavi A.A., Nicklin M.J.H., Sunter D.C., Barrett A.J.; "Cystatin, a protein inhibitor of cysteine proteinases. purification from egg white, characterization, and detection."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schwabe C., Anastasi A., Crow H., Northwabe C., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=90008873; PubMed=2793849;
Colella R., Sakaguchi Y., Nagase H., Bird J.W.C.;
"Chicken egg white cystatin. Molecular cloning, nucleotide sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
MEDLINE=89052676; PubMed=3191914;
Bode W., Engh R., Musil D., Thiele U.,
Brzin J., Kos J., Turk V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEBS
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                                          modified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cystatin.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=83256421; PubMed=6409085; Anastasi A., Brown M.A., Kembhavi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Turk V., Br:
Machleidt W
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               phosphoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The disulphide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHARACTERIZATION OF PROTEIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=84110059; PubMed=6662498;
Turk V., Brzin J., Longer M., Ritonja A., Eropkin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 24-139.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The cysteine proteinase inhibitor chicken cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHOSPHORYLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochem. J. 211:129-138(1983)
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                                                                                                                                                                                   serum.
SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tissue distribution.";
Biol. Chem. 264:17164-17169(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7:2593-2599(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      serum."
                                          non-profit instituend this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inhibitors of cysteine proteinases. III. Amino-acid sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  248:162-168(1989).
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bridges
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s of human cys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    egg white.";
1. Chem. 364:1487-1496(1983)
is not removed. Usage by and for commercial agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Thiele U., Huber R., Karshikov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 characterization, and detection in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cystatin
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P14841;
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SEQUENCE
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ACT SITE
SITE
                   cysteine proteinase inhibitor cystatin C and for beta 2-minrollin rat brain.";
                                                                                                                                                                          RAT
                                           MEDLINE=90092122; PubMed=2689174; Cole T., Dickson P.W., Esnard F., Gauthier F., Schreiber G.;
                                                                                                                                                                                                                                                                                                                              TURN
HELIX
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STRAND
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HELIX
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HELIX
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MOD_RES
SEQUENCE OF 8-127.
                                                                   STRAIN=Buffalo;
                                                                         SEQUENCE FROM N.A.
                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                             Rattus norvegicus (Rat).
                                                                                                                             Cystatin
                                                                                                                                                                                                                                                                                                                TURN
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                                                                                                                                                                                                                                                                                                                                                                   TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
              Eur. J. Biochem. 186:35-42(1989)
                                                                                        NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                        STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                                                         STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00031; cystatin;
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PDB; 1A67; 27-MAY-98
                                                                                                                                                                                                                                                                           Local
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                                                                                                                                                                                                                                                                           Similarity
                                                                                                                             a
                                                                                                                                                                                                                                               QYNKESDDKYHERIFRVLKVQRQVTDHLBYHLNVEMQWTTCQKP--ETTNC-VPQERELH
                                                                                                                                                                                                        KYTTCTFVVYSIPWLNQIKLL
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                                                                                                                                                                                                                      KOVNCFFSVFAVPWFEQYKIL
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                                                                                                                            (Rel. 14, Created)
(Rel. 14, Last sequence update)
(Rel. 41, Last annotation update)
precursor (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor;
                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                               139
32
80
104
138
103
                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                          34.6%;
                                                                                                                                                                                                                                                                                                  15287 MW;
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REACTIVE SITE.
SECONDARY AREA
                                                                                                                                                                                                                                                                  Score 154.5; DB:
Pred. No. 6.1e-11
7; Mismatches 30
                                                                                                                                                                                                                                                                                                                                                                                                                 PHOSPHORYLATION
                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                   PRT;
                                                                                                                                                                                                        13,
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                                                                                                                                                                                                                                                                                                  D92D1131C4D37891 CRC64;
                                                   Averill F.,
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                                                                                                                                                                                                                                                                                  DB 1;
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                             for beta 2-microglobulin
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PIR; S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=88313020; PubMed=3044831;
Esnard R., Esnard F., Faucher D., Gauthier
"Two rat homologues of human cystatin C.";
FEBS Lett. 236:475-478(1988).
                                                                                                                                                                                                                                                                                                                                    Thiol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=92225121; PubMed=1563513;
Esnard A., Esnard F., Guillou F., Gauthier F.;
"Production of the cysteine proteinase inhibitor cystatin C by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Rat cystatin C: the N-glycosylation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Esnard F., En
Brillard M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=90380276; PubMed=2400577; Esnard F., Esnard A., Faucher D.,
                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: As an inhibitor of cysteine proteinases, this protein thought to serve an important physiological role as a local regulator of this enzyme activity. Known to inhibits cathepsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: Belongs to the cystatin family.
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                                                                                                                                                                 1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC-VPQERELH 57
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                                                                                                                       KOVNCFFSVFAVPW 71
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Gauthier F.;
                                                                                                                                                                                                                                                                                                                                                                   ; cystatin;
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                                             STANDARD;
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36, Created)36, Last sequence update)41, Last annotation update)
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BY SIMILARITY.
BY SIMILARITY.
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W; 78F70158B7925853 CRC64;
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smatches 24;
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15-JUL-1998
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                             Saimiri sciureus (Common squirrel monkey).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Platyrrhini, Cebidae, Cebinae, Saim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOD RES
                                                                                                                                                                                   cerebrovascular beta-amyloidosis.";
Stroke 27:2080-2085(1996).
                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=97054523; PubMed=8898820;
Wei L.H., Walker L.C., Levy E.;
"Cystatin C. Icelandic-like mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             019093;
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MEDLINE=97420480; PubMed=9276465;
Gerhartz B., Engh R.A., Mentele R., Eckerskorn C., Torquato R.,
Wittman J., Kolb H.J., Machleidt W., Fritz H., Auerswald E.A.;
"Quail cystatin: isolation and characterisation of a new member of
"the cystatin family and its hypothetical interaction with cathepsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cystatin (Egg-white cystatin).
Coturnix coturnix japonica (Japanese quail).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                     This SWISS-PROT entry is copyright. It is produced t
between the Swiss Institute of Bioinformatics and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cystatin
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                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9521;
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SMART; SM00043; CY; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000010;
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                                                                                                                                      FUNCTION: As an inhibitor of cysteine proteinases, thought to serve an important physiological role as
                                                                                                                regulator of this enzyme activity
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(Rel. 41, Last annotation
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                                                                 "Stroke
related
                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-87219149; PubMed=3495457;
Abrahamson M., Grubb A., Olafsson I., Lundwall A.;
"Molecular cloning and sequence analysis of cDNA codi
precursor of the human cysteine proteinase inhibitor
FEBS Lett. 216:229-233(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-JUL-1986 (Rel. 01, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Cystatin C precursor (Neuroendocrine basic polypeptide) (Gamma-trace)
(Post-gamma-globulin).
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Mammalia; Eutheria;
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Abrahamson M., Olafsson I., Palsdottir A., Ulvsbaeck M., Lundwall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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HSSP; P01034; 1G96.
                                                                                                                              MEDLINE=89235594;
                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                             Jensson O., Grubb A.,
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                                  "Structure and expression of the human Biochem. J. 268:287-294(1990).
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                                                             o J., Geltner D., s with hereditary cystatin C gene,
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RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Deloukas P., Matthews L.H., Ashurst J., Bardon J., Gilbert J.G.R.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Bear D.M.,
RA Bailey J.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chagman J.C., Clamp M., Clark R.P., Carder C., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Milne S.A., Mistry D., Moore M.J.P., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.P., Mullikin J.C., Nickerson T.,
RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Milne A., Milliams L., Williams S.A.,
RA M
                                                                                                                     RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Whiting M., Madan A., Young A.C., Shavchenko Y., Bouffard G.G.,
RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
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RA Blakesley R.W., Touchman J.W., Schmutz J., Myers R.M.,
"Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=21638749;
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MEDLINE=89350949; PubMed=2764935;
Saitch E., Sabattini L.M., Eddy R.L.,
Isemura S., Sanada K.;
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                                                     MEDLINE=82222268;
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                      Loefberg H.;
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                                                     PubMed=6283552;
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during the evolution
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Brzin J., Popovic T., Turk V.;
"Human cystatin, a new protein in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatin from chicken egg white."; Hoppe-Seyler's Z. Physiol. Chem. 364:1487-1496(1983).
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SEQUENCE OF 27-73.
MEDLINE=84110059; PubMed=6662498;
Arzin J., Longer M., Ritonja
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Human cystatin C, an amyloidogenic three-dimensional domain swapping."; Nat. Struct. Biol. 8:316-320(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cystatin.";
FEBS Lett.
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Biochem. Biophys. Res. Commun. 118:103-109(1984).
                                   EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBUNIT: Homodimer.

TISSUE SPECIFICITY: Expressed in highest levels in the epididymis vas deferens, brain, thymus, and ovary and the lowest in the submandibular gland.

DISEASE: Defects in CST3 are a cause of hereditary cerebral hemorrhage with amyloidosis (HCHWA) [MIM:105150]; also known as cerebral amyloid angiopathy (CAA) or cerebroarterial amyloidosis Icelandic type. HCHWA is characterized by a thickening of the cerebral arteries walls with deposition of material with the characteristics of amyloid.
L; X05607; CAA29096.1; -.

L; X52255; CAA36497.1; -.

L; M27891; AAA52164.1; JOINEL

L; M27890; AAA52164.1; JOINEL

L; X61681; CAA43856.2; -.

L; X61682; CAA43856.2; JOINEL

L; X61683; CAA63856.2; JOINEL

L; X61683; CAA63856.2; JOINEL

L; X6121894; CAC05424.1; -.

L; BC013083; AAH13083.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thought to serve an important phys regulator of this enzyme activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: As an inhibitor of cysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in
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Acad. Sci. U.S.A. 79:3024-3027(1982)
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RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., And Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Almesda J.P., Babbage A.K., Bagguley C.L., RA Basiley J., Bariow K.F., Bates K.N., Beard L.M., Beare D.M., Ra Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., RA Collson A., Coville G.J., Deadman R., Dhami P.D., Dunn M., RA Collson A., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E., RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P., RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S., RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A., RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T., RA Milner K., Parker A., Patel R., Pearce T.A.V., Peck A.I., RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S., RA Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
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Best Local 9
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P09278; OSUCQ7;

01-MAR-1989 (Rel. 10, Created)

01-MAR-1989 (Rel. 10, Last sequence update)

28-FEB-2003 (Rel. 41, Last annotation update)

78-FEB-3003 (Rel. 41, Cast annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                           (1)
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-88185836; PubMed=3446578;
Saitoh E., Kim H.-S., Smithies O., Maeda N.;
Saitoh E., Kim H.-S., Smithies O., maeda N.;
"Human cysteine-proteinase inhibitors: nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=21638749; PubMed=11780052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
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Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16;
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REACTIVE SITE.
SECONDARY AREA
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Pred. No. 7e-10;
6; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
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                                                                                                                                                                                                                                                                                                                                 This SWI
                                                                                                                                                                                                                                                                                                                                                                                  Saitoh E., Isemura S., Sanada K., Kim H.-S., Smithies O., Maeda N. "Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily related to family III cystatin genes."; Biol. Chem. Hoppe-Seyler 369:191-197(1988).

-I- FUNCTION: Thiol protease inhibitor.

-I- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isemura S., Saitoh E., Sanada K., Isemura M., Ito S.; "Characterization and amino acid sequence of a new acc proteinase inhibitor (cystatin SA) structurally close cystatin S, from human whole saliva."; (In) Turk V. (eds.);
                                                                                                                                                     MIM;
                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 25-141 FROM N.A. MEDLINE=89076505; PubMed=3202964;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Characterization and amino acid sequence of a proteinase inhibitor (cystatin SA) structurally cystatin S, from human whole saliva.";
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                                                                                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not removed.
                                                                SIGNAL
                                                                                                  Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                       GO; GO:0004869; F:cysteine
                                                                                                                                                                Genew; HGNC:2474; CST2.
                                                                                                                                                                              HSSP; P01034; 1G96
                                                                                                                                                                                                                                                                               entities
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                                                                               rhiol
                                                                                         PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 414:865-871(2001).
                                                                                                                                                                                                                                                   cities requires a license agreement (See http://www.isb-sib.ch/announce/send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem.
                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                        European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through a collaboration -
                                                                           protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proteinases and their inhibitors, pp.497-505 e Gruyter, Berlin and New York (1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence and comparative analysis of human chromosome 20.";
                                                                                        PS00287;
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                                                                           inhibitor;
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                                                                                        CYSTATIN;
                                                                                                                             Cystatin.
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                                                                                                                                                                                                                 JOINED.
                                                                         Signal; Multigene
                                                                                                                                         protease inhibitor activity; TAS
CYSTATIN SA.
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SECONDARY AREA
BY SIMILARITY.
BY SIMILARITY.
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SEQUENCE
                                                                                                                                                                                                                                                                                       ACT SITE
                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wei L.H., Walker L.C., Levy B.; "Cystatin C. Icelandic-like mutation cerebrovascular beta-amyloidosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; Cercopithecinae; Macaca.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U51912; AAB64050.1; -. HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Macaca mulatta (Rhesus macaque).
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                                                                                                                                                                                                                                                                                                                                                                                 Thiol
                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00031; cystatin;
SMART; SM00043; CY; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nterPro; IPR000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in ified and this statement is not removed. Usage by and for content and the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thought to serve an important physiological role at regulator of this enzyme activity.
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                                                                                                                                                     Similarity
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  KQVNCFFSVFAVPW
                                           EYNKASNDMYHSRALQVVRARKOIVAGVNYFLDVELGRTTCTKTQPNLDNCPFHEQPHLK 118
                                                                                   QYNKESDDKYHFRIFRYLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCVPQER-ELH
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CYSTATIN C.
REACTIVE SITE.
SECONDARY AREA OF CONTACT.
BY SIMILARITY.
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Pred. No. 8.8
                                                                                                                                 Score 144.5; DB 1;
Pred. No. 9.2e-10;
6; Mismatches 27;
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RX MEDLINE=22188257; PubMed=12477932;

RX MEDLINE=22188257; PubMed=12477932;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wanng J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wanng J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

"Generation and initial analysis of more than 15,000 full-length

RT human and mouse cDNA sequences.",

Proc. Natl. Acad. Sci. U.S.A. 9916899-16903(2002)

1. FUNCTION: As an inhibitor of cysteine proteinases, this protein is

CC thought to serve an important physiological role as a local

CC thought to serve an important physiological role as a local

CC thought to serve an important physiological role as a local
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CYTC MOUSE
P21460;
01-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beeson M., Gordon L., Bennett B., Johnson T.E., Sikela J.M.;
"High-throughput sequence identification of gene coding variants within alcohol-related QTLs.";
Mamm. Genome 12:657-663(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=BALB/c; TISSUE=Brain;
MEDLINE=91054522; PubMed=2241983;
Solem M., Rawson C., Lindburg K., Barnes D.;
"Transforming growth factor beta regulates cystatin mouse embryo (SFME) cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U1-FEB-1996 (Rel. 33, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Cystatin C precursor (Cystatin 3).
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01-FEB-1996 (Rel. 33,
10-OCT-2003 (Rel. 42,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Structural organization, expremouse cystatin-C-encoding gene Gene 152:221-226(1995).
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Mammalia; Eutheria; Rodentia;
                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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MEDLINE=21363810; PubMed=11471062;
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                                                                                    regulator of this enzyme accurate.
SIMILARITY: Belongs to the cystatin family.
    European
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stazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
steria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
    Bioinformatics Institute.
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Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Al Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L., Ra Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., Ra Bailey J., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Ra Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P., Check D., Burrill W.D., Butler A.P., Carder C., Carter N.P., Ra Chapman J.C., Clamp M., Clark G., Clark G.N., Clark S.Y., Clee C.M., Chapman J.C., Clamp M., Clark G., Clark R.E., Cornor R.E., Corby N.R., Ra Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Ra Cliegg S., Cobley V.E., Collier R.D., Dami P.D., Dunn M., Ra Collson A.G., Frankland J.A., Fraser A., French L., Garner P., Ra Ellington A.G., Frankland J.A., Fraser A., French L., Garner P., Ra Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.J., Ra Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., Ra Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D., Ra Kay M.P., Kinberley A.M., King A., Knights A., Laird G.K., Lawlor S., Ra Kay M.P., Kinderley A.M., King A., Knights A., Laird G.K., Lawlor S., Ra Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D., Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
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Best Local
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EMBL; U10098; AAB41056.1; --
EMBL; AF483486; AAL90760.1; --
EMBL; AF483487; AAL90761.1; --
EMBL; BC002072; AAH02072.1; --
EMBL; BC002072; AAH02072.1; --
PIR; A36163; A36163.
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28-FEB-2003
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PROSITE;
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28-FEB-2003
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                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                 Cystatin-like
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                                                                                                                                                                                                                                  MEDLINE=21638749; PubMed=11780052;
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                                                                                                                                                                                                                                                                                                                     Homo sapiens
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140 AA;
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; AAL90761.1; -.
; AAH02072.1; -.
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REACTIVE SITE.
SECONDARY AREA OF CONTACT.
BY SIMILARITY.
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A -> G (IN REF. 1).
L -> F (IN REF. 1).
M; 3A563406DD58D0F5 CRC64;
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3; Mismatches
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Pred. No. 1.
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nes 25;
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Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
Skuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
Tracey A., Tromans A.C., Vaudin M., Wallis J.M., Wallis J.M.,
Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000010; Cystatin. PROSITE; PS00287; CYSTATIN; FAThiol protease inhibitor; Sign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rogers J.; "The DNA sequence and comparative analysis of human chromosome 20."; Nature 414.865-871(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
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                                                            112 KRNDTSNSSCPLOSKKLRKSLICESLIYTMPWINYFOLWN 151
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                                                                                                                                                                                            l Similarity
27; Conserv
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                                                                                                                                                          YNKESDDKYHFRI FRVLKVQ------
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Pred. No. 5.9e-09;
94; Mismatches 27;
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Post-processing: Minimum Match 0%
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Perfect score:
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Maximum DB seq length: 200000000
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2: sp_bacteria:*
3: sp_fungi:*
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446
1 QYNKESDDKYHFRIFRVLKV.....NCFFSVFAVPWFEQYKILNK 80
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Copyright (c) 1993 - 2004 Compugen Ltd.
sp_organelle:*
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sp_rodent:*
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sp_vertebrate:*
sp_unclassified:*
sp_virus:*
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sp_invertebrate:*
sp_mammal:*
sp_mhc:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length DB	B B B	ID
2 +	269	60.3	139	<u>,</u>	Q8K5A3
ω	217.5	48.8	103		Q8WXUS
4	169.5	38.0	141	11	Q9DAP1
ņ	169.5	38.0	141	1	Q80ZN5
6	145.5	32.6	140	11	Q9EPX9
7	133	29.8	140	11	Q80Y72
89	115	25.8	112	13	Q98SR4
9	115	25.8	112	13	Q98SR3
10	106	23.8	167	4	Q7Z4J8
11	105.5	23.7	148	11	Q9JM84
12	104.5	23.4	146	11	Q8K397
13	104.5	23.4	149	11	Q8VHC1
14	104.5	23.4	149	11	Q9D1B1
15	100.5	22.5	130	11	08VIH8
16	oo n	ر د	128		

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15.0	15.0	15.0	15.4	15.5	15.5	15.6	15.9	16.1	16.1	16.3	16.3	16.6	16.8	16.8	17.0	17.2	17.2	17.5	17.7	18.3	18.9	19.8	19.8	20.1	21.4	21.5	22.3	22.3
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Q88Z07	08TD53	044396	O8GVD9	018150	Q9D264	Q7SYH2	044421	Q8NDM7	P70517	Q801E5	Q7ZY91	Q8MVB6	016454	Q7YRP6	Q63581	Q17108	Q9U9A1	Q12700	P90698	Q9NH95	Q25620	016159	Q8JFU5	Q8VII2	Q9TY65	Q9QWL5	Q8VII3	Q9CX46
Q88z07 lactobacill	O8td53 homo sapien	O44396 haemonchus	Q8qvd9 helianthus		Q9d264 mus musculu	Q7syh2 xenopus lae	O44421 drosophila	Q8ndm7 homo sapien	P70517 rattus norv	Q801e5 xenopus lae	Q7zy91 xenopus lae	Q8mvb6 ixodes scap	O16454 caenorhabdi		Q63581 rattus norv	Q17108 acanthochei	Q9u9al onchocerca	_	P90698 brugia mala		Q25620 onchocerca	O16159 brugia mala	Q8jfu5 brachydanio	N	Q9ty65 onchocerca	Q9qwl5 mus musculu	Bru	mus

ALIGNMENTS

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LT 2	61 NCFFSVFAVPWFBQYKILNK 80 	1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQV 60 	Query Match 100.0%; Score 446; DB 4; Length 138; Best Local Similarity 100.0%; Pred. No. 1.1e-46; Matches 80; Conservative 0; Mismatches 0; Indels 0; Gaps 0;		PTAM; PF00031; CYSTATIN; 1. SMART; SM00043; CY; 1.	0010; Cystatin.	GO; GO:0004869; F:cysteine protease inhibitor activity; IBA.	מבווים / מכווים ווא	"SC13: A novel epididymal specific member of the cystatin family.";	YL., French F.S., Hall S.H.;	SEQUENCE FROM N.A.	NCB1 TAXTD=9606;	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens (Human).		(TremBirel, 24, Last annotation	-2002 (TrEMBLrel. 20, Creat	QBWXU6;	LT 1 U6 Q8WXU6 PRELIMINARY; PRT; 138 AA.	

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RESULT 3
QBWXUS
ID QBWX
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Matches 44
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Q8K5A3;
01-OCT-2002
01-OCT-2002
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                 Q8WXU5
Q8WXU5;
01-MAR-2002
                                                                                                                                                                                            Hamil K.G., Liu Q., Zhang Y.-L., French F.S., Hall S.H.; "SC13: A novel epididymal specific member of the cystatin family."; Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF501290; AAM21709.1; -... GO:0004869; F:cysteine protease inhibitor activity; InterPro; IPR000010; Cystatin. Pfam; PF00031; Cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-Sprague-Dawley;
Hamil K.G., Hall S.H.;
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
Fukarvota: Metazoa; Chordata;
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Mammalia; Eutheria;
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01-JUN-2003
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                            InterPro;
                                                                                                                                                                     L; AF335481; AAL71992.1; -. GO:0004869; F:cysteine protease inhibitor activity; IEA.
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                                                                                         l Similarity 45; Conserv
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                     NCFFSVFAVPWFEQYKILNK 80
                                                            QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQV 60
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00031; Cystatin; 1.
103 AA; 12285 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rodentia;
                                                                                                    48.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.0%;
                                                                                                                                                                                                                                                                                                            20,
20,
24,
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Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                            Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 269; DB 11;
Pred. No. 4.9e-25;
9; Mismatches 17
                                                                                                    Score 217.5; DB 4
Pred. No. 7.1e-19;
                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
  98
                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                       05DD92C47387B022 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E1E36DB786B4D08C CRC64;
                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                          103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17;
                                                                                                              4.
                                                                                         0;
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                                                                                                              Length
                                                                                          Indels
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                                                                                                                 103;
                                                                                         35;
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RESULT 4

RESULT 5 Q80ZN5

Q80ZN5

PRELIMINARY;

141

8

Q80ZN5;

RRR OCCORDITAC

Eukaryota; Metazoa; Mammalia; Eutheria;

Chordata; Rodentia;

Sciurognathi; Muridae; Murinae;

Craniata; Vertebrata; Euteleostomi;

NCBI_TaxID=10090; [1] SEQUENCE FROM N.A. TISSUE=Testicle; 01-JUN-2003 (TrEMBLrel. 24, 01-JUN-2003 (TrEMBLrel. 24, 01-OCT-2003 (TrEMBLrel. 25, RIKEN CDNA 1700006C19 gene. Mus musculus (Mouse)

Last sequence update)
Last annotation update)

Created)

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RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Toyo-oka K., Mashima J., Mazzarelli R., Barsh G.,
RA Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Brownstein M.J., Ballt C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Mordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Manshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                   Query Match
Best Local S
                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9DAP1;
01-JUN-2001 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
1700006C19Rik protein.
1700006C19RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9DAP1
                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                            "Functional annotation of a full-length Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                         Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                          GO; GO:0004869; F:cysteine protease
                                                                                                                                                                                                                                                                                                            EMBL; AK005665; BAE
HSSP; P01038; 1CEW.
                                                                                                                                                                                                                                                                                                                                                                              Hayashizaki Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                          MGD; MGI:1916544; 1700006C19Rik.
                                                                                                                                                                                                                                                         InterPro; IPR000010;
114
                              58
                                                                54
                                                                                                                                     35;
                                                                                                 1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK--PETTNCV-PQERELH
                                                                                                                                                     Similarity
                                                                KMVFCIFIVSSKPWKFELKMLKK
                          KOVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                         141 AA;
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                            BAB24175.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Rodentia;
                                                                                                                                                                                                         16811 MW; C20FA0D8B1AC378C CRC64;
                                                                                                                                                     38.0%;
                                                                                                                                                                                                                                                           Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17,
17,
24,
                                                                                                                                     17; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                       Pred.
                                                                                                                                                        Score 169.5;
Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
136
                                                                                                                                                       No.
                                                                                                                                                                                                                                                                           inhibitor activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141 AA
                                                                                                                                                                                                                                                                                                                                                              mouse cDNA collection.";
                                                                                                                                                     .4e-13
                                                                                                                                                                       DB 11;
                                                                                                                                   28;
                                                                                                                                                                       Length 141;
                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h M., Ishii Y.,
J., Fukuda S.,
Yamanaka I.,
                                                                                                                                     <u>ں</u>
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                                                                                                                                     Gaps
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PT COLORS
RESULT 7
Q80Y72
ID Q80Y72
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Best Local S
Matches 35
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9EPX9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; BC048681; AAH48681.1; --
GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
InterPro; IPR0001019; Cystatin.
InterPro; IPR003243; Cystatin_C/M.
Pfam; PF00031; Cystatin; 1.
ProDOm; PD001231; Cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.;
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                             Taupin P.J., Ray J., Fischer W.H., Gage F.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2001
01-JUN-2003
                                                                                                                                                                                                                                                        Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                     HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cystatin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2001
                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                     VARIANT
                                                                                                                                                                                                                                            PROSITE; PS00287;
                                                                                                                                                                                                                                                                                                                                      autocrine/paracrine cofactor.";
                                                                                                                                                                                                                                                                                                                                                  "FGF-2-Responsive neural stem cell proliferation requires
                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=21010502; PubMed=11144350;
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                            VARIANT
                                                                                                                                                                                                                                                                                                                            Neuron 28:385-397(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                              GO:0004869; F:cysteine protease inhibitor activity; IEA erpro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114 KMVFCIFIVSSKPWKFELKMLKK 136
                                                         113
                                                                                                                                                                                                                                                                                                     P01034; 1G96.
                                                                               58
                                                                                                     53
                                                                                                                                                                                                                                                                                                                AF311741; AAG40283.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58
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                                                                                                                                                   29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35;
                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KQVNCFFSVFAVPWFEQYKILNK 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EYNKASNDLYNFRVVDILKSQEQITDSLEYYLEVNIARTMCKKIAGDNENCLFQQDPKMK 113
                                                                              KQVNCFFSVFAVPWFEQYKILN 79
                                                                                                      EYNKGSNDAYHBRAIQVVRARKQLVAGVNYFLDVEMGRTTCTKSQTNLTDCPFHDQPHLM 112
                                                                                                                           OYNKESDDKYHFRI FRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNC-VPQERELH 57
                                                         RKALCSFQIYSVPWKGTHSLTN 134
                                                                                                                                                                                                84
140 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 16, (TrEMBLrel. 16, (TrEMBLrel. 24,
                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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  PRELIMINARY;
                                                                                                                                                                                              140 C:
16 A
84 L
; 15517 MW;
                                                                                                                                                                                                                                           CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16825 MW; C20FA0D8A884951F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38.0%;
                                                                                                                                                   32.6%; Score 145.5; DB 11; Length 140; 35.4%; Pred. No. 6.4e-10; tive 20; Mismatches 30; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 169.5; | Pred. No. 7.4e
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Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                   CYSTATIN C.
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  PRT;
                                                                                                                                                                                                 3A563406DD58D785 CRC64;
                                                                                                                                                                                                                                                                                                                                                                      Suhr S.T., Hakansson
  140
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es 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
  B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                         K., Grubb
                                                                                                                                                                                                                                                                                                                                                ccg,
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RESULT 8
Q98SR4
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RA Klausner R.D., Collins F.S., Wagner L., Schemen C.M., Schuler G.D.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altechul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Schapleton M., Sudin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Walen T.B., Malek J.A., Gunaratne P.H.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Mitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Korywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
Cystatin-like 1.
                         Acipenser sinensis (Chinese sturgeon)
Bukaryota; Metazoa; Chordata; Craniat
Actinopterygii; Chondrostei; Acipense
                                                                                                01-JUN-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; BC048646; AAH48646.1;
GO; GO:0004869; F:cystcine protease
InterPro; IPR000010; Cystatin.
InterPro; IPR003243; Cystatin_C/M.
Pfam; PF00031; cystatin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q80Y72;
                                                                                Cystatin (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jones S.J., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090
                                                                                                                                                       Q98SR4;
                                                                                                                                                                         Q98SR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001231; Cystatin_C/M; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and mouse cDNA sequences.";
            Acipenser.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rissuE=Testicle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EQUENCE FROM N.A.
TaxID=61970;
                                                                                                                                                                                                                                                            115
                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                              60 VNCFFSVFAVPWFEQYKILN 79
                                                                                                                                                                                                                                                                                                                                                                                                      26;
                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                              YNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPET--TNCVPQERELHKQ 59
                                                                                                                                                                                                                                                            LICKSLIYSVPWMNYYOLWN 134
                                                                                                                                                                                                                                                                                                                                 YNNASNDTYLYQVQKLIQGQMQLTTGVEYLVTVKIGRTKCKKNETKKASCPLQSSKLKKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MAR-2003) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140 AA;
                                                                                                  (TrEMBLrel. 17, (TrEMBLrel. 17, (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16199 MW; 32633E99C4697DA0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                   29.8%;
32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24, Created)
24, Last sequence 25, Last anno
                                                                                                                                                                                                                                                                                                                                                                                               Score 133; Ub ...
Pred. No. 2.2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                      22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                Created)
Last sequence update)
Last annotation update)
                               ; Craniata; Vertebrata; Euteleostomi; Acipenseriformes; Acipenseridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor
                                                                                                                                                                         112
                                                                                                                                                                           A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 140;
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; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                      2:
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RESULT

Q98SR3

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                                                                                                                                                                                                                             Query Match
Best Local
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bai J., Lao H., Ye X., Li Y., Lou J.;
"Molecular cloning and sequence analysis of cystatin cDNA from
"molecular cloning and sequence analysis of cystatin cDNA from
species of sturgeons.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF334611; AAX16732.1; -.
HSSP; P01038; 1A90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acipenser schrenckii (Amur sturgeon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2003 (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular cloning and sequence analysis of cystatin cDN species of sturgeons."; Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF334610; AAK16731.1; -.
                                                                                                                                                                                                                                                                                                           PROSITE; PS00287; CYSTATIN; 1.
NON TER 1 1
SEQUENCE 112 AA; 12231 MW;
                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0004869; F:cysteine pro
InterPro; IPR000010; Cystatin.
Pfam; PF00031; Cystatin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q98SR3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0004869; F:cysteine protease inhibitor activity;
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cystatin (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q98SR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=111304;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acipenser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00287; CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P01038; 1A90.
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84
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                                                54 RELHKOVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29;
                                                                                                                                                                                                        29;
                                                                                                                                1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK---PETTNC----VPQE 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQK---PETTNC----VPQE 53
                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RELHKOVNCFFSVFAVPWFEQYKIL 78
                                                                                                  EFNKASNDMYIHRVSKVVKVQKQVVAGIKYIVTVQMGRTSCRKGGAEKIELCAFHDVP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EFNKASNDMYIHRVSKVVKVQKQVVAGIKYIVTVQMGRTSCRKGGAEKIELCAFHDVP--
-ELAKTSTCTFEVVSRLWIPETKLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -ELAKTSTCTFEVVSRLWIPETKLV 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112 AA; 12231 MW;
                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25.8%;
34.1%;
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34.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18; Mismatches
                                                                                                                                                                                                   ; Score 115; DB 13; ; Pred. No. 2.7e-06; 18; Mismatches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                         protease inhibitor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 115; DB 13; Pred. No. 2.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r
G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48ECEBFED8A08C00 CRC64;
                                                                                                                                                                                                                                                                                                              48ECEBFED8A08C00 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      analysis of cystatin cDNA from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J.;
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                                                                                                                                                                                                        28;
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                                                                                                                                                                                                                                                     Length 112;
                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                           IEA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
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RESULT 10

Conservative

16;

Mismatches

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Query Match
Best Local S
Matches 24
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9JM84
Q9JM84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

Kalnine N., Chen X., Rolfs A., Halleck A., Hines L., E.

Koundinya M., Raphael J., Moreira D., Kelley T., LaBae:

Phelan M., Farmer A.;

Submitted (AUG-2003) to the EMBL/GenBank/DDBJ database:

EMBL, BT09825, AAP88827.1;

SEQUENCE 167 AA; 18857 MW; E339025A5BD60177 CRC64;
                                                                                                                                                                EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2003 (TrEMBLrel. 25, 01-OCT-2003 (TrEMBLrel. 25, 01-OCT-2003 (TrEMBLrel. 25, Cystatin F (Leukocystatin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q7Z4J8;
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q7Z4J8
                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                           DD72 protein (Similar to cystatin 10) CST10 OR DD72.
                                                             PRINTS; PR00295; STI
SMART; SM00043; CY;
PROSITE; PS00287; C'
                                                                                                                                                                                                     Strausberg R.;
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                              "DD72, a novel mouse ossification.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                   SEQUENCE
                                                                                      Pfam; PF00031; cystatin; 1.
PRINTS; PR00295; STEFINA.
                                                                                                            MGD; MGI:1930004; Cst10.
GO; GO:0004889; F:cysteine protease inhibitor activity; IEA.
InterPro; IPR000010; Cystatin.
InterPro; IPR001713; StefinA.
                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Salivary gland;
                                                                                                                                                                                                                                                                   Submitted (JAN-2000)
                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
Ikegawa S., Nakamu
                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                  P01034; 1G96.
                                                                                                                                                                           AB036743; BAA95411.1; -. BC048364; AAH48364.1; -.
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8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23;
 Similarity
24; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPE---TTNCVPQERELH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KQTLSCYSEVWVVPWLQHFEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KQ-VNCFFSVFAVPWFEQYKI 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KENNCTNDMFLFKESRITRALVQIVKGLKYMLEVEIGRTTCKKNQHLRLDDCDFQTNHTL 140
                                                   148 AA;
                                                                                                                                                                                                                                                                                                        Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                  (Mouse)
                                                             CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                         Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Primates;
                                                 16451 MW;
                                                                                                                                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23.8%;
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                                                                                                                                                                                                                                                                                           gene implicated in the early stage of ectopic
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           23.7%;
                                                                                                                                                                                                                                                                   the
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Last annotation update)
                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 106; DB 4;
Pred. No. 5.2e-05
2; Mismatches 3:
           Score 105.5; DB : Pred. No. 5.3e-05
                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                   637534CBFC5AA179 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167
                                                                                                                                                                                                                                                                                                                                                                                                         (Chondrocytes).
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                        DB 11; Length 148;
                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                     databases
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LaBaer
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aer J., Lin
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RESULT 13
Q8VHC1
ID Q8VHC
AC Q8VHC
AC Q8VHC
DT 01-MA
DT 01-JU
DE CYSta
CYSta
COC Euker
OC Euker
OC Mamma
COC MAMMa
TO 10-JU
DE CYST
OC NCBI
RN [1]
RN [1]
RP SEQUI
RP SUBMA
RT N.";
DR GG; (
DR GG; (
DR SMAR'
SQ SEQUI
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ID Q8
AC Q
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Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                              Q8VHC1;
Q8VHC1;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8K397;
01-OCT-2002
01-OCT-2002
01-JUN-2003
                                                                                           Submitted (JUL-2001) to the EMBL/Ger
EMBL; AY046415; AAL02328.1; -.
GO; GO:0004869; F:cysteine protease
                                                                                                                                                                                SEQUENCE FROM N.A.
Hong J., Rosner M.R.;
"Characterization of a noval cysteine proteinase inhibitor,
                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Fukarvota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2002 (TrEMBLrel. 22, Last sequel 01-JUN-2003 (TrEMBLrel. 24, Last annota RIKEN cDNA 1110017E11 gene (Fragment). Mus musculus (Mouse).
                      InterPro; IPR000010; Cystatin. Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; BC027680; AAH27680.1; -.
GO: GO:0004869; F:cysteine protease inhibitor activity; IEA.
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                    Cystatin N.
                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8K397
  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NON TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GQQEKLRCNFELLEVPWKNTTQLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP-----ETTNCVPQER 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVICNFQINVAPWLNKMSMTN 142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YNMGSDSLYYFRDTKVIDAKYOLVAGIKYYLTLDIESTECRKTRVSGEHMDLTTCPLAAG 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVNCFFSVFAVPWFEQYKILN
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                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 20, CTEMBLrel. 20, CTEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146 AA;
       149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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Rodentia;
                                                                                                                                                                                                                                                                                                              Rodentia;
  16792 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 104.5; DB 11;
Pred. No. 6.9e-05;
"'amatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                             EMBL/GenBank/DDBJ
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                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; I
Sciurognathi; Muridae;
  190DD8A89EC133C0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9D77BB9A6063A5C4 CRC64;
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                                                                                                inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149
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                                                                                                activity; IEA
                                                                                                                                             databases
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                                                                                                                                                                                                                                                                                                              Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146;
                                                                                                                                                                                          cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
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RESULT 14
Q9D1B1
     RC STRAIN=CS7BL/6J; TISSUB=Embryo;
RX KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Saito R.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T.,
RA Kadota K., Matsuda Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kushi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kushi I., Staubi F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubi F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Brownstein M.J., Bult C., Pletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local S
Matches 24
                                                     60,770 full-length cDNAs.";
Nature 420:563-573(2002).
EMBL; AK003744; BAB22976.1; -
EMBL; AY093591; AAW11475.1; -
EMBL; AK078116; BAC37132.1; -
HSSP; P01038; 1CEW.
99 jg
100 jg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
1110017E11Rik protein (Cystatin M/E) (Cystatin N homolog)
1110017E11RIK OR CST6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9D1B1
Q9D1B1;
                                                                                                                                                                                                                                                                                STRAIN=12986/SvEvTac; TISSUE-Spleen; Zeeuwen P.L.J.M., van Vlijmen-Willems I.M.J.J., Merkx G.F., Schalkwijk J.; Mutation.", "A mouse cystatin M/B-null mutation."; Submitted (MAR-2002) to the EMBL/GenBank/DDBJ d.
                                                                                                                                                                                                                                SEQUENCE FROM N.A. STRAIN=C57BL/6J; TISSUE=Medulla oblongata;
                                                                                                                                                                                                                                                                                                                                                                                                                              Hayashizaki Y.; "Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                          the RIKEN Genome Exploration Research Group Phase I "Analysis of the mouse transcriptome based on functi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                 The FANTOM Consortium,
                                                                                                                                                                                                                  MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                               Nature 409:685-690(2001).
, MGI:1920970; Cst6.
GO:0001533; C:cornified
GO:0008544; P:epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VQQEK-----LRCNFELLEVPWKNTTQLL 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YNMDSNSLYYFRDTKVIDAKCQLVAGIKYYMTVDIESTECRKTRVSGDHVDLTTCPLAAG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VPOERELHKOVNCFFSVFAVPWFEOYKIL 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Rodentia;
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   envelope; IDA.
differentiation;
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                                                                                                                                                                                                                                                                                                                                                                                                                              full-length
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Pred. No. 7.1e-05;
1; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           149
                                                                                                                                                                                                                                                                                                                                                                                                                                mouse
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on functional
                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA collection.";
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                                                                                                                                                                  annotation
                                                                                                                                                                                Team;
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RESULT 15
Q8VIHA
AC Q8VIH
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RN [1] -
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RN II Y.
RA LI Y.
RA EMBI;
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DR GO; GC
DR THEER
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Best Local S
Matches 22
                                                                                                                                                                                                                                                                                    Query Match 22.5%; Score 100.5; DB 11; Length 130; Best Local Similarity 28.8%; Pred. No. 0.00019; Matches 23; Conservative 21; Mismatches 33; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8VIH8 PRELIMINARY; PRT; 130 AA.

Q8VIH8;
Q1-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Cystatin SC.
Rattus norvegicus (Rat).
Rattus norvegicus (Rat).
Rattus norvegicus; Chordata; Craniata; Vertebrata; Euteleostomi;
Rammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                           STRAIN-Sprague-Dawley; TISSUE-Testis;
Li Y, Friel P.J., Griswold M.D.;
Li Y, Friel P.J., Griswold M.D.;
Li Y, Friel P.J., Griswold M.D.;
"Molecular cloning and characterization of cystatin SC and cystatin TE-1, new members of the cystatin family.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF442205; AA13350.1; -
GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
InterPro; IPR000010; Cystatin.
Pfam; PF000031; cystatin; 1.
SMART; SM00043; CY; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000010; Cystatin.
Pfam; PF00031; cystatin; 1.
SEQUENCE 149 AA; 16796 MW; E713EB920E0EFCC5 CRC64;
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                                                                                             104 KVHCVFQVDARPWFSHFTVL 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22; Conservative
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Similarity 26.2%; Pred. No. 7.1e-05;
22; Conservative 20; Mismatches 35; Indels 7;
                                                                                                                                     QVNCFFSVFAVPWFEQYKIL 78
                                                                                                                                                                                           ÓFNDNNSEENTYRLLEVGRAOKK-TWTMIFLMDLEMGRTICKKHDENIHNCPLLQGSGEK 103
                                                                                                                                                                                                                                     QYNKESDDKYHFRIFRVLKVQRQVTDHLEYHLNVEMQWTTCQKPETT--NCVPQERELHK 58
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Maximum Match 100%
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6 Human cys
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4 5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
99.5	99.5	100.5	101.5	105	106	106	106	106	107.5	107.5	107.5	111	111	111	111	111	111	112.5	112.5
29.8	29.8	30.1	30.4	31.4	31.7	31.7						33.2						33.7	33.7
116	116	116	116	145	145	145	145	145	141	141	141	165	165	165	145	145	145	142	142
ω	w	w	w	4	σ	U	Δ,	4	4	4	ω	σ	ຫ	4	σ	ഗ	4	7	7
AAY81207	AAY81203	AAY81212	AAY81210	AAU08667	ABG75925	AAU76578	AAE04887	AAE04323	AAE04432	AAE02403	AAY96576	ABG75918	AAU76556	AAE04324	ABG75917	AAU76555	AAE04315	ADD46710	ADD46706
Aay81207 Egg white	Aay81203 Egg white		Aay81210 Egg white	Human	Abg75925 Human cys	Aau76578 Human 2cy	Aae04887 Human pro	Aae04323 Human Zcy	Aae04432 Mouse tes	Aae02403 Murine cy	Aay96576 Murine cy	Abg75918 Human cys	Aau76556 Human Zcy	Human	Abg75917 Human cys	Aau76555 Human Zcy	Aae04315 Alternati	Add46710 Human Pro	Add46706 Human Pro

ALIGNMENTS

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper 15-JUL-2002 (first entry) AAU79866 standard; peptide; Holloway JL, 01-SEP-2000; 2000US-0230230P 29-AUG-2001; 2001WO-US026868. WO200220567-A2 Homo sapiens. sperm Human cystatin-8 (Zcys8) antigenic fragment #14. AAU79866; 14-MAR-2002. (ZYMO) ZYMOGENETICS INC. Gao Z, fertilisation; antigenic Bishop 59 PD; ₽ peptide

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large

spermatogenesis, and inhibiting cancer procoagulant protei to inhibition of thrombotic events associated with cancer.

Claim 2; Page 99; 100pp; English.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads

WPI; 2002-383044/41.

quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8) 59 AA;

Query Match Best Local S Matches 59 59 Similarity 100.0%; ilarity 100.0%; Conservative 0 ç Score 334; DB 5; Pred. No. 3.1e-34; ; Mismatches 0; Length Indels 0 Gaps 0

밁 Ś 1 RQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 59 RQVTDHLEYHLNVEMQWTTCQKPETINCVPQERELHKQVNCFFSVFAVFWFEQYKILNK 59

AAU79865 standard; peptide; 80

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper sperm acogements; seminal fluid viscosity; cryopreserved motility; fertilisation; antigenic peptide. sperm;

Human cystatin-8 (Zcys8) antigenic fragment #13

15-JUL-2002 (first entry)

Homo sapiens

WO200220567-A2

29-AUG-2001; 2001WO-US026868

01-SEP-2000; 2000US-0230230P

(OMYZ)

Holloway JL, Gao Z, Bishop Da

WPI; 2002-383044/41.

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

Claim 2; Page 98; 100pp; English.

antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polypeptide (I). (I) is useful for: inhibiting cancer proceagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm fluid viscosity, enhancing viability of cryopreserved sperm, sperm contility and fertilisation; and as antigenic peptides to generate The invention describes an isolated mammalian cystatin-8 (Zcys8)

> ននននន្តន 문 Ś Query Match polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8) Sequence 80 Local 22 l Similarity 59; Conserv RQVTDHLEYHLNVEMQWTTCQXPETTNCVPQERELHXQVNCFFSVFAVPWFEQYKILNK ROVIDHLEYHLIVEMOWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK Conservative 100.0%; 0; Score 334; D Pred. No. 4.5 O; Mismatches 334; DB 5; No. 4.5e-34; Length 0 Gaps 80 59 0

15-JUL-2002 AAU79853 standard; protein; 115 AA (first entry

Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper sperm motility; fertilisation; antigenic fragment. Human cystatin-8 (Zcys8) antigenic fragment cryopreserved sperm;

WO200220567-A2

14-MAR-2002

29-AUG-2001; 2001WO-US026868

01-SEP-2000; 2000US-0230230P

(ZYMO) ZYMOGENETICS

Holloway JL, Gao Z, Bishop gg

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

Claim 2; Page 94; 100pp; English

CC associated with cancer; promoting spermatogenesis, modulating seminal CC associated with cancer; promoting spermatogenesis, modulating seminal CC filid viscosity, enhancing viability of cryopreserved sperm, sperm cm tility and fertilisation; and as antigenic peptides to generate CC antibodies. Zcys8 is useful as research reagent for characterising sites CC of interaction between Zcys8 and its receptor. Zcys8 is useful in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in vitro for the CC presence of Zcys8. The antibodies are also useful to isolate large CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. CC The polymucleotide encoding (I) is useful to detect and to localise the coligonucleotide probes are useful for in vivo diagnosis. The CC oligonucleotide encoding (I) is useful in determining whether a subject's CC copy number changes, insertions, deletions, restriction site changes and copys and contain a mutation in the Zcys8 gene in a five annealing that inserticity in the cores gene in the contains and copys and contains and copys and copy The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant rearrangements and genetic

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                                                                                                                                                      of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polymucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polymucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events
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                                   This sequence represents an antigenic fragment of human cystatin-8 (Zcys8)
                                                                                                copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.
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spermatogenesis; seminal fluid viscosity; cryopreserved sper
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                                                                  the amino acid
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                                                               sequence of human cystatin-8
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Pred. No. 7e-34;
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Mismatches
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                                                                  (Zcys8
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Query Match

100.0%;

Score 334;

DB

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Length 137;

Sequence 137 AA;

Best Local Similarity

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                                                                                    associated with cancer; promoting sparmatogenesis, modulating seminal fillid viscosity, enhancing viability of cryopreserved sperm, sperm compility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in canhancing fertilisation during assisted reproduction in humans and in canhancing fertilisation during assisted reproduction in humans and in canhancing fertilisation and the production in humans and in the presence of Zcys8. The antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 genes. Coligonucleotide probes are useful for in vivo diagnosis. The polynucleotide probes are useful for in vivo diagnosis. The composines contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.

This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
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     Matches
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                                                                                  Sequence 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Holloway JL,
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                           Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Page 99; 100pp; English.
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       1 Similarity
48; Conserv
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81.7%; 5r/
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       . 1.1e-26;
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NVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 59

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RQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 34

ROVIDHLEYHLNVEMQWITCQKPETINCVPQERE 52

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Query Match Best Local S

Similarity

58.1%; but 100.0%; Pr

Score 194; Pred. No.

9.6e-17; DB 5;

Length 52; Indels

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                                                                                                                                                                                                                    fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene line for the gene in a station in the Zcys8 gene line for the contain a mutation in the Zcys8 gene line for the contain and zcys8 gene line for the zcy
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Sequence 52
                                                                                        copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
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protein in an inc
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    (I) is useful for: inhibiting cancer procoagulant
individual and thus inhibiting the thrombotic events

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RESULT 8
AAU79862
ID AAU7
IS-J
XX AAU7
IN Cyst KW Sper ID AAU7
ID AAU7
ID AAU7
IN WO20
IN 
AAU79860
ID AAU7
XX
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                                                                                                RESULT 9
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of interaction between ZcysB and its receptor. ZcysB is useful in enhancing ferrilisation during assisted reproduction in humans and in animals. Anti-[1] antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of ZcysB. The antibodies are also useful to isolate large quantities of ZcysB protein and DNA sequences that encode ZcysB genes. The polynucleotide encoding [1] is useful to detect and to localise the expression of a ZcysB gene in a biological sample and ZcysB oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding [1] is useful in determining whether a subject's chromosomes contain a mutation in the ZcysB gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the ZcysB gene.

This sequence represents an antigenic peptide of human cystatin-8 (ZcysB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 33 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000; 2000US-0230230P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU79862 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ZYMO ) ZYMOGENETICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Page 97; 100pp; English.
                                                                                                                                                                                                                                                                                                                             33;
                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                       QVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE 34
                                                                                                                                                                                             QVTDHLEYHLNVEMQWTTCQKPETTNCVPQERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gao Z,
                                                                                                                                                                                                                                                                                                               56.6%; ~
100.0%; Pr
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                                                                                                                                                                                                                                                                                                                                                     Score 189; DB 5;
Pred. No. 2.4e-16;
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                                                                                                                                                                                                 33
                                                                                                                                                                                                                                                                                                                                                                                    Length 33;
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AAU79860 standard; peptide;

46

RESULT 10
AAU79863
ID AAU79
XX
AC AAU79
XX
AC AAU79
XX
XX
XX
XX
XX
XX
XX
XX
XX

AAU79863 standard;

peptide; 49

15-JUL-2002 AAU79863;

(first entry)

밁 5

20

1 ROVIDHLEYHLNVEMOWITCOKPETIN 27

RQVTDHLEYHLNVEMQWTTCQKPETTN 46

Query Match Best Local S Matches

Similarity 27; Conserv

Conservative

Pred. No.

8.6e-1 DB 5;

Length 46 Indels

0

Gaps

0

Mismatches

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The invention describes an isolated mammalian cystatin-8 (Zcys8)
CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant
CC protein in an individual and thus inhibiting the thrombotic events
CC associated with cancer; promoting spermatogenesis, modulating seminal
CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm
CC motility and fertilisation; and as antigenic peptides to generate
CC antibodies. Zcys8 is useful as research reagent for characterising sites
CC of interaction between Zcys8 and its receptor. Zcys8 is useful in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in humans and in
CC enhancing fertilisation during assisted reproduction in the cys8 enes.
CC prospuncleotide encoding (I) is useful to detect and to localise the
CC polynucleotide probes are useful for in vito diagnosis. The
CC polynucleotide probes are useful for in vito diagnosis.
CC copy number changes, insertions, deletions, restriction site changes and
CC copy number changes, insertions, deletions restriction site changes and
CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
CC This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 97; 100pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                spermatogenesis, and inhibiting cancer procoagulant protei to inhibition of thrombotic events associated with cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000; 2000US-0230230P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-AUG-2001; 2001WO-US026868
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46.1%; Sur
100.0%; Pr
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Human

cystatin-8 (Zcys8) antigenic fragment #11

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RESULT 11
ADD46708
ID ADD46
XX ADD46
XC ADD46
XX DD7 29-JJ
XX DE Rat |
XX Rat;
KW Rat;
KW Rat;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC polypeptide (I). (I) is useful for: inhibiting cancer proceedulant CC protein in an individual and thus inhibiting that thrombotic events CC associated with cancer; promoting spermatogenesis, modulating seminal CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm CC motility and fertilisation; and as antigenic peptides to generate CC antibodies. Zoy88 is useful as research reagent for characterising sites CC of interaction between Zoy88 and its receptor. Zoy88 is useful in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation during assisted reproduction in humans and in CC enhancing fertilisation seed bloops and sutopsy material in vitro for the CC presence of Zoy88. The antibodies are also useful to isolate large CC quantities of Zoy88 protein and DNA sequences that encode Zoy88 genes. CC The polymucleotide encoding (I) is useful to detect and to localise the coplymucleotide probes are useful for in vivo diagnosis. The CC chromosomes contain a mutation in the Zoy88 gene like aneuploidy, gene CC copy number changes, insertions, deletions, restriction site changes and carrangements and genetic alterations that inactivate the Zoy88 gene. CC This sequence represents an antigenic peptide of human cystatin-8 (Zoy88)
                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 27
                 Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                 29-JAN-2004
                                                                                                                                                    ADD46708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
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                                                                          Rat Protein AAC36317, SEQ ID NO 12393
                                                                                                                                                                                        ADD46708 standard; protein; 142 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 49 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 2; Page 97-98; 100pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-SEP-2000; 2000US-0230230P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200220567-A2
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                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                            27; Conserv
                                                                                                                                                                                                                                                                                                                         L
                                                                                                                                                                                                                                                                                                         RQVTDHLEYHLNVEMQWTTCQKPETTN 27
                                                                                                                                                                                                                                                                                    ROVIDHLEYHLNVEMOWITCOKPETIN 49
                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                               (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          describes an isolated mammalian cystatin-8 (2cys8)
                                                                                                                                                                                                                                                                                                                                                                              46.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bishop PD
                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                              Score 154;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                              9.3e-12;
                                                                                                                                                                                                                                                                                                                                                                                                   DB 5;
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                               Length 49
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RESULT 12 ADD46704 ID ADD46 XX

ADD46704 standard; protein; 142 AA.

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136

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The invention discloses a composition comprising two or more isolated rat CC or human polynucleotides or a polynucleotide which represents a fragment, CC derivative or allelic variation of the nucleic acid sequence. Also CC claimed are a vector comprising the novel polynucleotide, a host cell CC comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a CC kit to perform the method, an array, a method for identifying an agent compound that is differentially expressed in neuronal tissue of a first animal cc subjected to pain, a method for identifying an agent compound that regulates the expression of the polynucleotide sequence the expression of a polynucleotide sequence which is differentially compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the specification, a method for identifying a pharmaceutical composition, a compound useful in treating pain and a pharmaceutical composition comprising the one or more compound that regulates the activity is useful for preparing a medicament for treating compound telegration, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more compound that composition comprising the one or more compound that composition comprising the one or more compound that segmental nerve injury (chung), chronic construction computed that compound that co
                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 142 AA;
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01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ftp.wipo.int/pub/published_pct_sequences.
59 K 59
                                                                                 77
                                                                                                                                                                                                                                                25;
                                                                                                                                                               2 QVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GEN HOSPITAL CORP.
BAYER AG.
                                                                                                                                                                                                                                                                                           Similarity
                                                                             QITDRMEYHIDVQISRSNCRKPLNNTENCIPQKNPKLEKKLSCSFLVGALPWNGEFDLLS
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                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                       43.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Befort K,
                                                                                                                                                                                                                                                19;
                                                                                                                                                                                                                                                Score 143.5; DB 7
Pred. No. 6.7e-10;
9; Mismatches 14
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                                                                                                                                                                                                                                                    14;
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                                                                                                                                                                                                                                                                                                                                  Length
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                                                                                                                                                                                                                                                                                           CC kit to perform the method, an array, a method for identifying an agent CC that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal CC that is differentially expressed in neuronal tissue of a first animal CC the expression of a polynucleotide sequence which is differentially CC expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the compound that regulates the activity of a pharmaceutical composition, a CC method for identifying a compound or small molecule that regulates the CC polynucleotides, a method for producing a pharmaceutical composition, a CC method for identifying a compound or small molecule that regulates the CC expression, a method for identifying a compound useful in treating CC polypeptides or their antibodies. The polynucleotide or the compound that CC polypeptides or their antibodies. The polynucleotide or the compound that CC modulates its activity is useful for preparing a medicament for treating CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene CC therapy). The sequence presented is a rat protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note:
                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New composition comprising two or more isolated polypeptides, useful preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                                                                                     Sequence 142
                                                                                                                                                                                                                                       specification, but was obtained in electr
ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page; 1017pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Woolf C, D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GEHO )
(FARB )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rat Protein AAC36317, SEQ ID NO 12389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADD46704;
                                                                                                                                                                                                                                                              sequence data for this patent did not form part of the printed rification, but was obtained in electronic form directly from WIPO at
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                                                                                                                                            Similarity
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  K 59
                                     QITDRMEYHIDVQISRSNCRKPLNNTENCIPQKNPKLEKKLSCSFLVGALPWNGEFDLLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC36317
                                                                             QVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 58
                                                                                                                       Conservative
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                                                                                                                   Score 143.5; DB 7
Pred. No. 6.7e-10;
9; Mismatches 14
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                                                                                                                     Indels
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                                                                                                                                                                                                                                              RESULT 14
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to cystatin T (also known as zcys3) DNA an protein sequences. Cystatin T is testis specific and is homologous to cystatin-related epididymal specific gene (CRES) and type 2 cystatins. Cystatins inhibit cysteine proteinases and are found with male reproductive tissues and secretions. Cystatin T sequence is useful for modulating spermatogenesis and studying, diagnosing and treating reproductive disorders. The present sequence is murine cystatin-related
                                                                     04-SEP-2001
                                                                                                                              AAE04433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 142 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Col 45-46; 32pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cystatin T polypeptides are useful for modulating spermatogenesis and studying, diagnosing and treating reproductive disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-NOV-1998;
28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-AUG-2001
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                                                                                                                                                                                    AAE04433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          epididymal specific (CRES) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                studying, diagnosing and treating reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-342846/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-MAY-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 QVTDHLEYHLAVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cystatin-related
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                                                                                                                                                                                    standard; protein; 142
                                                                                                                                                                                                                                                                                                                                  K 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                  OITDRMEYOIDVOISRSNCKKPLNNTENCIPOKKPELEKKMSCSFLVGALPWNGEFNLLS
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                                                                     (first entry)
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99US-0156382P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 142.5; DB 4
Pred. No. 8.9e-10;
9; Mismatches 14
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Mouse cystatin-related epididymal specific (CRES)

protein.

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RESULT 15
ADA14374
ID ADA14
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XX
AC ADA14
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DT 06-NC
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DE Mouse
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Mouse
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Best Local S
Matches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein which is homologous to mouse testis specific cystatin T (also known as zcys3). The cystatin T polymucleotide is useful in gene therapy applications, where it is desired to increase or inhibit cystatin T activity. It is also useful for producing cystatin T polymeptide, as well as for detecting the expression of a cystatin T gene in a biological sample. The cystatin T is useful for modulating spermatogenesis, and may be used to study or modulate that function in in vitro or in vivo systems. In particular, it is also useful for enhancing sperm production, increasing the number of viable sperm in a sample, or enhancing
                            expression abnormal succinyl CoA:3-oxo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polynucleotides encoding testis-specific cystatin-like protein cystatin T, useful in gene therapy for modulating cystatin T activ particularly for modulating spermatogenesis, or enhancing sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse; cystatin T; zcys3; testis specific; cystatin-related epididymal specific gene; sperm production; antiinfertility.
                                                                            mouse; spermatogenesis; gene cluster; mutagenicity;
                                                                                                                                         06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-NOV-1998;
28-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
    Mus musculus
                                                                                                             Mouse
                                                                                                                                                                        ADA14374;
                                                                                                                                                                                                      ADA14374 standard; protein; 143 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 142 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is mouse cystatin-related epididymal specific (CRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Col 47-48; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              production or fertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-407271/43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Holloway JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUL-2000; 2000US-00617302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US6245529-B1
                                                               reproductive toxicity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fertilisation
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                                                                                                                                                                                                                                                                               137 K 137
                                                                                                          spermatogenesis related protein sequence
                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                                                                                                                      2 QVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 58
                                                                                                                                                                                                                                                                                                                                                                                                      25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZYMOGENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                             X 59
                                                                                                                                                                                                                                                                                                                                         QITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPELEKKMSCSFLVGALPWNGEFNLLS
                                 abnormality;
oA:3-oxo acid
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                         (first entry)
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99US-0156382P.
99US-00431480.
                                                                                                                                                                                                                                                                                                                                                                                                                  42.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INC.
                               reproductive capacity; mutation; human male sterility associated gene; d COA transferase; human male sterility.
                                                                                                                                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 142.5; DB 4;
Pred. No. 8.9e-10;
                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              spermatogenesis modulator;
CRES; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 142;
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completed: March

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2004, 17:10:28

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Coligonucleotides; (4) primer sets for PCR amplification of cDNA or collegnous countering the mutagenicity and reproductive toxicity of a test conditional, by analysis of mutation approximation of the human male continuity associated gene scot-t (succiny) CoA:3-oxo acid CoA transferase cof fundividual, by analysis of mutation and expression abnormalities of genes in the cluster; (8) polynucleotides which are mutations of the human male cofference sterility associated gene scot-t (succiny) CoA:3-oxo acid CoA transferase cofference having one or more of the following specific mutations: T129C, CC T870G, C1071T, T1667C; (9) oligonucleotides containing partial sequences of human scot-t including one or more of the above mutations; (10) primer sets for PCR amplification of mRNA derived from the mutant scot-t gene; (11) polypoptides encoded by human scot-t gene and having one or more of the mutations of the human male sterility associated gene protamine2, containing containing containing containing containing containing containing containing containing gene; (12) polypucleotides (including labelled antibodies) to these polypoptides; (13) polypoptides; (17) DNA probes containing sequences of these mutant complynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides; and (18) DNA chip containing sequences derived from these mutant polynucleotides; of substances in dassessing the reproductive toxicity and mutagenicity of substances; and assessing the reproductive containing related protein, which is encoded by a cDNA sequence from the mutageness of success of the mouse containing sequence containing the containing the containing the containing containing the reproductive containing containing the containing containing the containing containing the containing containing containing the containing containing containing conta
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                                                                                              Matches
                                                                                                                                       Query Match
                                                                                                                                                                                    Sequence 143 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cluster; (2) oligonucleotides of 10-99 bases containing partial sequences of genes of the cluster; (3) microarrays containing these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              containing 89 genes
Also described: (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 6; Page 155; 262pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   substances for reproductive toxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse spermatogenesis gene cluster and human male sterility associated genes, useful for diagnosis of human male sterility and testing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-671663/63.
N-PSDB; ADA14477.
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27-DEC-2002; 2002JP-00381241.
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                                                                                                                    Local
                                                                                                                                                                                                                            mouse spermatogenesis gene cluster.
    77
                                               N
                                                                                            Similarity
25; Conserv
  QITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPELEKKMSCSFLVGALPWNGEFNLLS
                                             QVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN
                                                                                              Conservative
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    a cDNA library containing cDNA encoding the

                                                                                                                 42.7%;
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L9; Mismatches
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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142.5
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     seq length: 0 seq length: 2000000000
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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/bcTUS_COMB.pep:*

6: /cgn2_6/ptodata/2/iaa/backfIles1.pep:*
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Match Length
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334
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3 US-09-431-480-3

US-09-431-480-4

US-09-431-480-2

US-09-431-480-2

US-09-431-477-4

US-09-775-932-16

US-09-775-932-16

US-08-849-303-15

US-08-849-303-15

US-08-849-303-15

US-08-849-303-15

US-08-819-303-15

US-08-975-932-2

5432264-6

US-08-971-523-3

US-08-744-138-3

US-09-714-77-3

US-09-431-477-3

US-09-431-477-3

US-09-431-37-47

US-09-886-310A-47

US-09-976-594-37

US-09-976-594-37

US-09-976-594-37
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Sequence 3, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 15, Appli
Sequence 15, Appli
Sequence 19, Appli
Sequence 19, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 3, Appli
                                                                                                                                                                                 Patent No. 5.
Sequence 2,
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89.5 26.8 122 4 US-09-775-932-10 89.5 26.8 142 3 US-09-411-480-7 89.5 26.8 142 3 US-09-617-302-7 89.5 26.8 142 3 US-09-617-302-7 89.5 26.8 142 4 US-09-241-376-4 89.5 26.8 142 4 US-09-976-594-358 89.5 26.8 142 4 US-09-976-594-358 89.5 26.8 142 4 US-09-986-319A-46 88.5 26.5 140 4 US-09-886-319A-48 86.5 25.9 141 4 US-09-775-932-8 86.5 25.9 141 4 US-09-775-932-8 86.5 25.9 141 4 US-09-775-932-8 86.5 25.9 141 4 US-09-241-376-6 86.5 25.9 141 4 US-09-303-24 86.25.7 145 2 US-08-832-535-2	45	44	43	42	41	40	39	38	37	36	35	34	ω u	32	31	30	29	,
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	App1:	Appl:	Appl	Appl	App1	App1:	App1:	App	App1	App	, App	App1	App1	Appl	Appl	Appl	App	

ALIGNMENTS

RESULT 1

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CURRENT APPLICATION NUMBER: US/09/431,480
CCURRENT FILING DATE: 1999-11-01
EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
EARLIER FILING DATE: 1998-11-20
EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
SOFTWARE: PASTSEQ for Windows Version 3.0
SEQ ID NO 3
LENGTH: 142
TYPE: PAT
ORGANISM: Mus musculus
US-09-431-480-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 25; Conserve
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US-09-617-302-3
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                                                                                                                                                                         Sequence 3, Application US/09617302 Patent No. 6245529 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
                                                                                            APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
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41.0%; Pre
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60/156,382

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US-09-431-480-4
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Sequence 4, Application US/09617302

Patent No. 6245529

GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
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Best Local S
Matches 24
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LENGTH: 142
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PRIOR APPLICATION NUMBER: 60//
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
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EARLIER APPLICATION NUMBER: 60/109,217
EARLIER FILING DATE: 1998-11-20
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EARLIER FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 3.0
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39.3%;
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17; Mismatches 17;
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RESULT 6
US-09-617-302-2
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SEQ ID NO 4
LENGTH: 142
           Sequence 2, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T
FILE REFERENCE: 98-72 C1
CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09431480 Patent No. 6235708 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/431,480 CURRENT FILING DATE: 1999-11-01 EARLIER APPLICATION NUMBER: 60/109,217 EARLIER FILING DATE: 1998-11-20 EARLIER APPLICATION NUMBER: 60/156,382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: HOlloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1998-11-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EARLIER FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              137 K 137
                                                                                                                                                                                                                                                              136 K 136
                                                                                                                                                                                                                                                                                                 59 K 59
                                                                                                                                                                                                                                                                                                                                      76 QITDSLEYYLEVNIARTMCKKIAGDNENCLFQQDPKMKKMVFCIFIVSSKPWKFELKMLK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59 K 59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 QVTDHLEYHLNVEMQWTTCQKPETTN--CVPQER-ELHKQVNCFFSVFAVPWFEQYKILN
                                                                                                                                                                                                                                                                                                                                                                         2 QVTDHLEYHLNVEMQWTTCQK--PETTNCV-PQERELHKQVNCFFSVFAVPWFEQYKILN
                                                                                                                                                                                                                                                                                                                                                                                                                24;
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                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                            32.2%; Score 107.5; DB 3 39.3%; Pred. No. 5.6e-07; ative 12; Mismatches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3;
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; SEQ ID NO 2
; LENGTH: 141
; TYPE: PRT
; ORCANISM: Homo sapiens
US-09-617-302-2
                                                                                                                                                                                                                                                             RESULT 8
US-08-791-522-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT; ORGANISM: Gallus US-09-775-932-16
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US-09-775-932-16
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PRIOR APPLICATION NUMBER: 60/10
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/15
PRIOR FILING DATE: 1999-09-28
NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                                                                        Sequence 4, Application US/08791522 Patent No. 5935817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 16
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Patent No. 6534477
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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Best Local S
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CURRENT APPLICATION NUMBER: US/09/775,932
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
PRIOR FILING DATE: 1998-08-05
                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Bandman, Olg
APPLICANT: Goli, Surya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
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                                                                                                                             TITLE OF INVENTION: NOVEL H
                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                              JUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                   STREET:
COUNTRY:
                                                                        ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                         1 ROVIDHLEYHLNVEMOWITCOKP--ETTNC-VPQERELHKQVNCFFSVFAVPWFEQYKIL 57
                                                                                                                                                                                                                                                                                                                                                                                                              h 29.8%; Score 99.5; DB 4; Length 116; Similarity 36.7%; Pred. No. 5.3e-06; 22; Conservative 11; Mismatches 24; Indels
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Similarity 39.3%;
               Palo Alto
CA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver.
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VENTION: Production and use of Modified Cystatins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09775932
                                                     E: Incyte Pharmaceuticals, Inc
3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                    Bandman, Olga
                                                                                                                                               NOVEL HUMAN CYSTATIN-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.0
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Best Local Similarity
                                                                                                                                                                                                   Patent No. 6110686
                                                                                                      GENERAL INFORMATION:
APPLICANT: Bandman, Olga
APPLICANT: Bandman, Olga
APPLICANT: Goli, Surya K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PP
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMMEDIATE SOURCE:
LIBRARY: GenBank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                     CORRESPONDENCE ADDRESS
                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
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STATE:
               CITY: Palo Alto
                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
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                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLONE: 118195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
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                                                                                                                                                                                                                                                                                                                   75 ROLVSGIKYILQVEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                      Application US/09314777
ς
                                B: Incyte Pharmaceuticals, Inc
3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                         29.8%; Score 99.5; DB 2; 36.7%; Pred. No. 6.7e-06; tive 11; Mismatches 24;
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RESULT 9
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
US-09-314-777-4
Patent No. 6110686
; GENERAL INFORMATION:
APPLICANT: Goli, Surya K.
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSES: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304
COMPUTER: READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION UNMBER: US/09/314,777
FILLING DATE:
CLASSIFICATION UNMBER: US/09/314,777
FILLING DATE:
CLASSIFICATION UNMBER: 08/791,522
FILLING DATE:
APPLICATION UNMBER: 08/791,522
FILLING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy
REGISTRATION UNMBER: 96-0193 US

TELECOMMUNICATION INFORMATION:

TELEPHONE:

415-855-0555

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75 RQLVSGIKYILQVEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL 134

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US-08-849-303-15
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                                                 Matches
                                                                                Query Match
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APPLICANT: Ackins
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                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING CONTROL OF THE SOFTWARE: PATENTIN Release #1.0, CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/08/849,303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                TOPOLOGY: 1:
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ADDRESSEE: Klauber & Jackson
                                                                                                                                    HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 201-487-5800
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                                                                   Local
                                                                                                                                                                                                                                                                     TELEPHONE: 201-343-1684
                                                                                                                                                                                                                                                                                                                                NAME: Jackson Esq., David A. REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 132
                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LIBRARY: GenB
CLONE: 118195
                                                                                                                                                                               STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                 22;
1 RQVTDHLEYHLNVEMQWTTCQKP--ETTNC-VPQERELHKQVNCFFSVFAVPWFEQYKIL 57
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                                              h 29.8%; Score 99.5; DB 4; Length 1:
Similarity 36.7%; Pred. No. 6.7e-06;
22; Conservative 11; Mismatches 24; Indels
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                                                                                Length 139;
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5432264-6
;Patent No. 5432264
; Patent APPLICANT: GRUBB, ANDERS;LUNDWALL, AKE;ABRAHAMSON, MAGNUS;
;DALBOGE, HENRIK
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                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                           TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED BY EXPRESSION IN A PROCARYOTIC HOST CELL NUMBER OF SEQUENCES: 8 CURRENT APPLICATION DATA:
SEQ ID NO:6:
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Best Local Similarity
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
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                                                                                  APPLICATION NUMBER: US/07/929,290 FILING DATE: 13-AUG-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                 APPLICATION NUMBER: 440,221 FILING DATE: 21-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Jackson Esq., David A. REGISTRATION NUMBER: 26,742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
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STATE: New Jersey
                                  APPLICATION NUMBER: 297,198
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                 FILING DATE:
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McPherson, Michael J.
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Pred. No. 1.1e-05;
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                                                                                                                                                                                                                                                                                      ; TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED; BY EXPRESSION IN A PROCARYOTIC HOST CELL; NUMBER OF SEQUENCES: 8
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/929,290
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
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CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: C499/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin Ver: 2.0
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;DALBOGE, HENRIK
                                                                                                                                                               SEQ ID NO:4:
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Best Local S
Matches 19
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LENGTH: 120
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Best Local Similarity
Matches 22; Conserv
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APPLICANT: Universi
TITLE OF INVENTION:
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                                                                                                                                                                            PILING DATE: 13-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 440,221
PILING DATE: 21-NOV-1989
APPLICATION NUMBER: 297,198
FILING DATE: 20-MAY-1988
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
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                                                                                                                                            LENGTH: 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 27.1%; Score 90.5; DB 4;
Similarity 35.8%; Pred. No. 9.3e-05;
19; Conservative 10; Mismatches 21;
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                                                 27.1%; Score 90.5; DB 6; Length 1 35.8%; Pred. No. 9.3e-05; tive 10; Mismatches 21; Indels
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Search completed: March 23, 2004, 17:15:30 Job time : 13.0837 secs
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US-08-832-535-11
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SEQUENCE CHARACTERISTICS:
LENGTH: 145 amin
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Best Local Similarity
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/08/832,535
APPLICATION NUMBER: US/08/832,535
FILING DATE: 03-APR-1997
CLASSIFICATION: 435
ATTORNEY/ACENT INFORMATION:
NUMBER: TYPERIL BRITE
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APPLICANT: NI, JI
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                                                                                                                                                                                                                                             TYPE: amino dere STRANDEDNESS: single TOPOLOGY: linear mentide
                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: KIMBALL, PAUL C.
REGISTRATION NUMBER: 34
REFERENCE/DOCKET NUMBER:
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                                                                                                1 RQVTDHLEYHLNVEMQWTTCQK--PETTNC-VPQERELHKQVNCFFSVFAVPW 50
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GENTZ, REINER L
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Perfect score:
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/cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
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Sequence 4, Appli
Sequence 17, Appli
Sequence 17, Appli
Sequence 14, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 2, Appli
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25.0	25.3	25.7	25.7	25.9	25.9	25.9	26.5	26.5	26.8	26.8	26.8	26.8	27.1	27.1	27.1	27.1	27.1	27.1	28.1	28.9	29.0	29.2	29.8	29.8	29.8	29.8	31.7	33.2	33.2
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Sequence 334, App	Sequence 18, Appl	Sequence 197, App	Sequence 2, Appli		Sequence 24, Appl	Sequence 8, Appli	Sequence 48, Appl	Sequence 46, Appl	Sequence 132, App	Sequence 4, Appli	Sequence 20, Appl	Sequence 10, Appl	Sequence 47, Appl	e S	Sequence 3, Appli	Sequence 3, Appli	Sequence 17, Appl	'n	Sequence 2, Appli	Sequence 2, Appli	Sequence 37, Appl	Sequence 19, Appl	Sequence 42, Appl	Sequence 4, Appli		16,	14	5	Sequence 5, Appli

ALIGNMENTS

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Sequence 16, Application US/09941314
; Bequence 16, Application US/09941314
; Patent NO. US20020142396A1
; GENERAL INFORMATION:
; APPLICANT: ZymoGenetics, Inc.
; TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein FILE REFERENCE: 00-81PC
; CURRENT APPLICATION NUMBER: US/09/941,314
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: 06/230,230
; PRIOR APPLICATION ONDER: US/09-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PastSEQ for Windows Version 4.0
; SEQ ID NO 16
; SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-941-314-16
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US-09-941-314-16
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Sequence 15, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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Best Local Similarity
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FILE REFERENCE: 00-81PC

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FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 115
US-09-941-314-4
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                                                                              CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FAStSEQ for Windows Version 4.0
SEQ ID NO 4
                                                                                                                                                                                                                                            Sequence 4, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
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Patent No. US20020142396A1
GENERAL INFORMATION:
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LENGTH: 80
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CURRENT FILLING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
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ORGANISM: Homo sapiens
                     ORGANISM: Homo sapiens
                                                               LENGTH: 117
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100.0%; Pred. No. 8.2e-35;
tive 0; Mismatches 0;
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US-09-941-314-14

Sequence 14, Application US/09941314 Patent No. US20020142396A1

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US-09-941-314-17
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Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Processulant Protein
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 137
TYPE: PRT
ORGANISM: Homo sapiens
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Patent No. US20020142396A1
GENERAL INFORMATION:
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Best Local Similarity
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TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                                                                                                                 FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
                                                                                                                                                                                LENGTH: 4
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12 NVEMOWITCOKPETINCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROVIDHLEYHLNVEMOWTTCOKPETTNCVPOERELHKOVNCFFSVFAVPWFEQYKILNK 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROVTDHLEYHLNVEMOWTTCQXPETTNCVPQERELHXQVNCFFSVFAVPWFEQYKILNK 112
                                                                        Conservative
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                                                                 81.,
100.0%; Fr
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100.0%; Pred. No. 1e-34;
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                                                                                       Score 273; DB 9; 1; Pred. No. 1.9e-27;
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Pred. No. 8.3e-35;
                                                                        Mismatches
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                                                                                                        Length 48;
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GENERAL INFORMATION:

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Sequence 10, Application US/09941314

Patent No. US20020142396A1

GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Inhibit Cancer Procoagulant Pro
FILE REFERENCE: 00-81PC

CURRENT PILICATION NUMBER: US/09/941,314

CURRENT PILING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR FILING DATE: 2001-09-01

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 10

LENGTH: 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/09941314

Patent No. US20020142396A1

GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use
TITLE OF INVENTION: Inhibit Cancer Procoagulant Pro
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-09-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR TILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: ZymoGenetics, Inc.

ITITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to ITITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to ITITLE OF INVENTION: Inhibit Cancer Procoagulant Protein FILE REFERENCE: 00-81PC

CURRENT APPLICATION NUMBER: US/09/941,314

CURRENT FILING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR FILING DATE: 2001-09-01

NUMBER OF SEQ ID NOS: 19

SOFTMARE: FastSEQ for Windows Version 4.0

SEQ ID NO 14

LENGTH: 52

TUDE: DOTATE: 19
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US-09-941-314-10
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US-09-941-314-14
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LENGTH: 33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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100.0%; Pred. No. 6.6e-17;
tive 0; Mismatches 0;
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100.0%; Pred. No. 2.5e-17;
tive 0; Mismatches 0;
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Sequence 13, Application US/09941314

Patent No. US20020142396A1

GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.

TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein FILE REFERENCE: 00-81PC

CURRENT APPLICATION NUMBER: US/09/941,314

CURRENT FILING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR FILING DATE: 2001-09-01

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FastSEQ for Windows Version 4.0

TYPE: PRT

TYPE: PRT
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US-09-941-314-11
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                                                                                                                                       ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-941-314-11
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APPLICANT: ZymoGeneetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
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                                                                     Matches
                                                                                    Query Match
Best Local Similarity
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Best Local Similarity 100.0%;
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Best Local
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ORGANISM: Homo sapiens
                                                                                                                                                                                        LENGTH:
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nes 27; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ROVIDHLEYHLNVEMOWITCOKPETIN 27
                    RQVTDHLEYHLNVEMQWTTCQKPE 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RQVTDHLEYHLNVEMQWTTCQKPETTN 49
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ROVIDHLEYHLNVEMOWTTCQKPE 24
                                                                   Conservative
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                                                                                    41.3%; Score 138; DB 9; 100.0%; Pred. No. 1.5e-1
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; Pred. No. 2.9e-12;
                                                                     Mismatches
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                                                                                                    Length 24;
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Sequence 2, Application US/10235148
Publication No. US20030100096A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: ZCys5: A Member of the Cystatin TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104C1
CURRENT APPLICATION NUMBER: US/10/235,148
CURRENT FILING DATE: 2002-09-04
PRIOR APPLICATION NUMBER: 60/172,119
PRIOR FILING DATE: 1999-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; SEQ ID NO 2
LENGTH: 145
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-006-467-2
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CURRENT FILING DATE: 2001-12-04
PRIOR APPLICATION NUMBER: 60/172,119
PRIOR FILING DATE: 1999-12-23
PRIOR APPLICATION NUMBER: 09/740,638
PRIOR APPLICATION NUMBER: 09/740,638
PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 3.0
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Matches
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Patent No. US20020006656A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: Zcys5: A Member of the Cystatin TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104
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Publication No. US20020164740A1
GENERAL INFORMATION:
APPLICANT: HOLLOWAY, James L.
TITLE OF INVENTION: ZCYS5: A Member of the Cystatin TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104C1
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Best Local S
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LENGTH: 145
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NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 3.0
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19; Conserv
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                                                                                                                                                                                                                                                                                                                                                                 RQLTTGVEYIVTVKIGWTKCKRNDTSNSSCPLQSKKLRKSLICESLIYTMPWINYFQLWN 131
                                                                                                                                                                                                                                                                                                                                                                                                             RQVTDHLEYHLNVEMQWTTCQKPETTN--CVPQERELHKQVNCFFSVFAVPWFEQYKILN 58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         33.2%; Score 111; DB 13; 31.7%; Pred. No. 3.3e-06; tive 18; Mismatches 21;
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Search completed: March 23, 2004, 17:17:52 Job time: 31.8452 secs

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; TYPE: PRT ; ORGANISM: Homo sapiens US-10-235-148-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-09-740-638-5
                                                                                                                                                   US-09-740-638-5
                                                                                                                                                                                                       FILE REFERENCE: 99-104
CURRENT APPLICATION NUMBER: US/09/740,638
CURRENT FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 165
                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/09740638
Patent No. US20020006656A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 09/740,638
PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 19; Conserv
                                                                        Matches
                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                       APPLICANT: Holloway, James L.
TITLE OF INVENTION: Zcys5: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 145
92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72
                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ROVIDHLEYHLNVEMOWITCOKPETIN--CVPOERELHKOVNCFFSVFAVPWFEQYKILN 58
                                   1 ROVTDHLEYHLNVEMOWTTCQKPETTN--CVPQERELHKQVNCFFSVFAVPWFEQYKILN 58
ROLTTGVEYIVTVKIGWTKCKRNDTSNSSCPLOSKKLRKSLICESLIYTMPWINYFQLWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ROLTTGVEYIVTVKIGWTKCKRNDTSNSSCPLQSKKLRKSLICESLIYTMPWINYFQLWN 131
                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                        33.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33.2%;
31.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Score 111; DB 14; ; Pred. No. 3.3e-06; 18; Mismatches 21;
                                                                        18; Mismatches
                                                                      Score 111; DB 9; 1
Pred. No. 3.8e-06;
8; Mismatches 21;
                                                                                                            Length 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 145;
                                                                          Indels
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 151
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Result
No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
       14
992.5
997.5
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886.5
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887.5
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-941-314-16
334
1 RQVTDHLEYHLNVEMQWTTC.....NCFESVFAVFWFEQYKILNK 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 23, 2004, 17:06:09; Search time 10.8619 Seconds (without alignments) 522.495 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283366 seqs, 96191526 residues
                                        GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
     踞
                        M45361
UDCH
S10587
S10785
UDHU
A47142
B29632
A26163
A26793
UDHU
DHUP1
UDHUP2
UDHUP2
UDHUP1
UDHUP3
UC2040
T23130
UDBO
UC2040
T23130
KGBOH2
KGBOH1
KGBOH1
KGBUH1
JQ1470
GWWYY
GWWYYP
T49362
A404440
C904442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
cystatin precursor cystatin C precurs cystatin C precurs cystatin C precurs cystatin C precurs cystatin SA precur cystatin SP precur cystatin S precurs cystatin S precurs cystatin S precurs cystatin S precur cystatin SP cound sa hypothetical prote kininogen, LAW I I kininogen, LAW I p kininogen, LAW I p cystatin precursor kininogen, LAW I p kininogen, L
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cystatin-related
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A45361
cystatin-related epididymal specific protein - mouse (fragment)
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45	44	43	42	41	40	9	38	37	36	35	3. <u>4</u>	ω ω	32	31	30
54.5	54.5	55	55	55	55	55.5	55.5	55.5	56	56	56	56	56	56.5	57
16.3	16.3	16.5	16.5	16.5	16.5	16.6	16.6	16.6	16.8	16.8	16.8	16.8	16.8	16.9	17.1
293	243	560	218	213	174	4540	938	555	1163	427	427	367	295	324	455
ν	,_	N	N	N	μ	N	N	N	N	N	N	N	N	N	N
A40644	JQ0021	S27387	A34445	B84333	TVVPA4	T30838	T41932	T24671	F84669	S13424	A44158	E75384	C43718	T41379	T15622
transcription regu	ubiquinol-cytochro	interferon alpha r	. 25K calcium-bindin	isopentenyl pyroph	small T antigen -	cytoplasmic dynein	hypothetical prote	hypothetical prote	probable chromosom	endothelin recepto	endothelin recepto	conserved hypothet	hypothetical prote	probable phosphati	hypothetical prote

ALIGNMENTS

UDCH UDCH (ystatin precursor - chicken Cyspecies: Gallus gallus (chicken) C;Bpecies: Gallus gallus (chicken) C;Bpecies: Gallus gallus (chicken) C;Apecies: Gallus gallus (chicken) R;Colella, R.; Sakaguchi, Y.; Nagase, H.; Bird, J.W.C. J. Biol. Chem. 264, 17164-17169, 1989 A;Title: Chicken egg white cystatin. Molecular cloning, nucleotide sequence, and tissue A;Reference number: A34456; MUID:90008873; PMID:2793849 A;Accession: A34456 A;Accession: A34456 A;Accession: A34456 A;Accession: A01274; MUID:9211714; PIDN:AAA48744.1; PID:g211715 R;Schwabe, C.; Anastasi, A.; Crow, H.; McDonald, J.K.; Barrett, A.J. Biochem. J. 217, 813-817, 1984 A;Title: Cystatin. Amino acid sequence and possible secondary structure. A;Accession: A01274; MUID:84178305; PMID:6712597 A;Accession: A01274	Qy 59 K 59 Db 134 K 134	OY 2 QVTDHLEXYHLNVEMQWTTCQKPETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 58 : : :: : : : : ::: : :: : : Db 74 QITDRMEYQIDVQISRSNCKKPLNNTENCIPQKKPBLEKKMSCSFLVGALPMNGBENLLS 133	Query Match 42.7%; Score 142.5; DB 2; Length 139; Best Local Similarity 41.0%; Pred. No. 6.3e-10; Matches 25; Conservative 19; Mismatches 14; Indels 3; Gaps 2;	A;Molecule type: nucleic acid A;Residues: 1-139 <cor> A;Cross-references: GB:S49926; NID:g260492; PIDN:AAC35390.1; PID:g260493 A;Cross-references: GB:S49926; NID:g260492; PIDN:AAC35390.1; PID:g260493 A;Note: sequence extracted from NCBI backbone (NCBIP:118813) C;Superfamily: cystatin; cystatin homology F;28-139/Domain: cystatin homology <cys></cys></cor>	R;Cornwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R. R;Cornwall, G.A.; Orgebin-Crist, M.C.; Hann, S.R. Mol. Endocrinol. 6, 1653-1664, 1992 A;Title: The CRES gene: a unique testis-regulated gene related to the cystatin family is A;Reference number: A45361; MUID:93078799; PMID:1280328 A;Recession: A45361 A;Status: preliminary; not compared with conceptual translation	C;Species: Mus musculus (house mouse) C;Species: Nus musculus (house mouse) C;Date: 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change 05-Nov-1999 C.Apcession. A4536

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A;Accession: S48159
A;Status: preliminary
A;Molecule type: protein
A;Residues: 24-139 -AUE>
R;Laber, B.; Krieglstein, K.; H
FEBS_Lett. 248, 162-168, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Introns: 76/3; 114/3
C;Superfamily: cystatin; cystatin homology
C;Superfamily: cystatin; cystatin homology
C;Keywords: cystatin proteinase inhibitor; egg white; phosphoprotein
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-139/Product: cystatin, long form #status experimental <CYLF>
F;30-139/Domain: cystatin homology <CYS>
F;30-139/Domain: cystatin homology <CYS>
F;32-139/Product: cystatin, short form #status experimental <CYSF>
F;76-80/Region: inhibitory #status predicted
F;94-104,118-138/Disulfide bonds: #status experimental
F;94-104,118-138/Disulfide bonds: #status experimental
cystatin C - rat
C;Species: Rattus sp. (rat)
C;Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
C;Accession: S10587
R;Esnard, F.; Esnard, A.; Faucher, D.; Capony, J.P.; Derancourt. J.: Hrillan
                                                                                                                                                                                           RESULT 3
S10587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:M95725
A;Note: authors failed to translate the codon for residue 115-Tyr
C;Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
C;Genetics:
A;Gene: Csn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: protein
A;Residues: 97-114 <LAB>
A;Residues: 97-114 <LAB>
R;Colella, R.; Bird, J.W.C.
Gene 130, 175-181, 1993
A;Title: Isolation and characterization of the chicken cystatin-encoding
A;Reference number: JN0789; MUID:93366172; PMID:8359684
A;Accession: JN0789
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A;Contents: annotation; disulfide bonds
R;Auerswald, B.A.; Naegler, D.K.; Schulze, A.J.; Engh, R.A.; Genenger, G.; Machleidt, W
R;Auerswald, B.A.; Naegler, D.K.; Schulze, A.J.; Engh, R.A.; Genenger, G.; Machleidt, W
Eur. J. Biochem. 224, 407-415, 1994
A;Title: Production, inhibitory activity, folding and conformational analysis of an N-t
A;Reference number: S48159; MUID:95010016; PMID:7925354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W. Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
A;Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystati A;Reference number: S01461; MUID:84110059; PMID:6662498
A;Accession: S01461
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A;Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein. A;Reference number: S04008; MUID:89252033; PMID:2721673

A;Accession: S04008
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A;Title: The disulphide bridges of human cystatin C (gamma-trace)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Anastasi, A.; Brown, M.A.; Kembhavi, A.A.; Nicklin, M.J.H.; Sayers, Biochem. J. 211, 129-138, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein
A; Residues: 24-139 < TUR >
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;Residues:
                                                                                                                                                                                                                                                                                                                                          75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                       RQLVSGIKYILQVEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL 134
                                                                                                                                                                                                                                                                                                                                                                                                          ROVIDHLEYHLIVEMOWITCOKP--ETINC-VPQERELHKQVNCFFSVFAVPWFEQYKIL 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29.8%; Score 99.5; DB 1; 36.7%; Pred. No. 9.3e-05; tive 11; Mismatches 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  K.; Henschen, A.; Kos, J.; Turk, V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (partial) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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       J.; Brillard,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene: Mapping
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       Gauth
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                                     C;Date: 06-Jul-1982 #sequence_revision 31-Mar-1991 #text_change 08-Dec-2000
C;Accession: S10216; S00004; JL0095; A33400; S02751; A01270; A25434; S12288; A32732; A60:
R;Abrahamgon, M.; Olafsson, I.; Palsdottir, A.; Ulvsbaeck, M.; Lundwall, A.; Jensson, O..
                                                                                                                                                                                                                                                                       DHO
                                                                                                                                                                                               N;Alternate
                                                                                                                                                                                                                             cystatin C precursor [validated] - human
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;Species: Homo sapiens (man)

names:

gamma-CSF; gamma-trace;

neuroendocrine basic polypeptide;

post-gamma

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Rissnard, A.; Esnard, F.; Faucher, D.; Gauthier, F.
FEBS Lett. 236, 475-478, 1988
A; Title: Two rat homologues of human cystatin C.
A; Reference number: S01337; MUID:88313020; PMID:3044831
A; Accession: S01337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #text_change 16-Jul-1999 C;Accession: S07085; S01337; S21109 R;Cole, T.; Dickson, P.W.; Esnard, F.; Averill, S.; Risbridger, G.P.; Gauthier, F.; Schre Eur. J. Biochem. 186, 35-42, 1989 A;Title: The CDNA structure and expression analysis of the genes for the cysteine protein A;Reference number: S07085; MUID:90092122; PMID:2689174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superramıı;. F;9-120/Domain:
                                                                                                                                                                         C;Keywords: cysteine proteinase inhibitor F;16-127/Domain: cystatin homology <CYS> F;80-90,104-124/Disulfide bonds: #status |
                                                                                                                                                                                                                                                                                                                                FEBS Lett. 300, 131-135, 1992

A;Title: Production of the cysteine proteinase inhibitor cystatin C

A;Reference number: S21109; MUID:92225121; PMID:1563513
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A; Residues: 1-120 <ESN>
밁
                                                                                                                                                                                                                                          A;Molecule type: protein
A;Residues: 8,'XX',11-20 <ES2>
C;Superfamily: cystatin; cystatin homology
                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 8-49 < ESN >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cystatin C precursor - rat (fragment) C;Species: Rattus norvegicus (Norway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S10587
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Title: Rat cystatin
                                                                                                                                                                                                                                                                                                              A; Accession: S21109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S07085
                                                                                                                                                                                                                                                                                                                                                                                                    ;Esnard, A.; Esnard, F.; Guillou,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Status: preliminary
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Best Local Similarity
                                                                                        Matches
                                                                                                               Query Match
Best Local
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le: Rat cystatin C: the complete amino acid sequence reveals a erence number: S10587; MUID:90380276; PMID:2400577
                                                                                                             Local
61
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                                                                                                               Similarity
KQLVAGINYYLDVEMGRTTCTKSQTNLTNCPFHDQPHLMRKALCSFQIYSVPW
                                            ROVIDHLEYHLNVEMOWTTCOKPET - - TNC - VPOERELHKOVNCFFSVFAVPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KOLVAGINYYLDVEMGRTTCTKSQTNLTNCPFHDQPHLMRKALCSFQIYSVPW 106
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                                                                                        Conservative
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                                                                                                          29.2%;
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Pred. No. 0.00
12; Mismatches
                                                                                                                                                                              #status predicted
                                                                                                             Score 97.5; DB 2; Pred. No. 0.00015;
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A;Molecule type: DNA
A;Residues: 82-119 <GH2>
A;Cross-references: EMBL:M27769
A;Cross-references: EMBL:M27769
A;Note: the authors translated the codon ACC for residue 105
R;Grubb, A.; Lofberg, H.
Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982
Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982
A;Title: Human gamma-trace, a basic microprotein: amino acid A;Reference number: A01270; MUID:82222268; PMID:6283552
A;Accession: A01270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M27889; GB:M27890; GB:M27891; NID:g181385; PIDN:AAA52164.1; R;Ghiso, J.; Cowan, N.; Frangione, B.
Biol. Chem. Hoppe-Seyler 369, 205-208, 1988
A;Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-ir A;Reference number: S02751; MUID:89076507; PMID:3264504
A;Accession: S02751
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A;Title: The human cystatin C gene (CST3) is a member of the A;Reference number: A33400; MUID:89350949; PMID:2764935
A;Accession: A33400
A;Molecule type: DNA
A;Residues: 1-24,'T',26-146 <SAI>
A; Keb-
R; Olafsson, 1.,
J. Clin.
                                                                                                                                                                                                                                         A;Residues: 27-73 <TUR>
R;Brzin, J.; Popovic, T.; Turk, V.
Biochem. Biophys. Res. Commun. 118, 103-109, 1984
A;Title: Human cystatin, a new protein inhibitor of cysteine proteinases
A;Reference number: A32732; MUID:84128015; PMID:6365094
A;Accession: A32732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: protein
A; Residues: 37-93, 'Q', 95-146 <GHI>
A; Residues: 37-93, 'Q', 95-146 <GHI>
R; Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, R; Turk, V.; Brzin, J.; Longer, M.; Ritonja, A.; 1487-1496, 1983
A; Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cyste A; Reference number: S01461; MUID:84110059; PMID:6662498
A; Accession: S12288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: protein
A;Residues: 27-131,'S',133-146 <GRU>
A;Residues: 27-131,'S',133-146 <GRU>
R;Ghiso, J.; Jensson, O.; Frangione, B.
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
A;Title: Amyloid fibrils in hereditary cerebral hemorrhage with amyloidosis of Iceland A;Reference number: A25434; MUID:86206076; PMID:3517880
A;Accession: A25434
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A;Residues: 1-146 <LEV>
A;Cross-references: GB:X61681; NID:g30367; PIDN:CAA43856.2; PID:g4490944
A;Cross-references: GB:X61681; NID:g30367; PIDN:CAA43856.2; PID:g4490944
A.More: the cystatin C gene isolated from the brain of an Icelandic pati
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R;Levy, E.; Lopez-Otin, C.; Ghiso, J.; Geltner, D.; Frangione, B.
J. Exp. Med. 169, 1771-1778, 1989
A;Title: Stroke in Icelandic patients with hereditary amyloid angiopathy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEBS Lett. 216, 229-233, 1987
A;Title: Molecular cloning and sequence analysis of cDNA coding A;Reference number: S00004; MUID:87219149; PMID:3495457
                                                                                                                                                             A; Molecule type: protein
A; Residues: 27-76 < BRZ>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-146 <AB1>
A;Cross-references: EMBL:X52255; NID:g30257; PIDN:CAA36497.1; PID:g296643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Structure and expression of the human cystatin C gene. A; Reference number: S10216; MUID:90303202; PMID:2363674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: protein
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                   II. Lab. Invest. 50, 85-93, 1990
Inn. Lab. Invest. 50, 85-93, 1990
e amino terminal portion of cerebrospinal fluid number: A60552; MUID:90193615; PMID:2315647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1-146 <AB2>
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                                                                                                                                  O.; Grubb,
                                                         cystatin C
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                                                                                                                                                                                                                                                                                                                                             cystatin D precursor - human (C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Date: 03-May-1994 #sequence_revision 03-May-1994 #sequence_C;Accession: A47142; S18212 R;Preije, J.P.; Balbin, M.; Abrahamson, M.; Velasco, G.; Dalboge, H.; Grubb J. Biol. Chem. 268, 15737-15744, 1993
A,Fitle: Human cystatin D. CDNA cloning, characterization of the Escherichia A,Reference number: A47142; MUID:93340179; PMID:8340398
                   A;Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711 A;Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711 A;Note: single residue difference between this report and S18218 was investigated R;Freije, J.P.; Abrahamson, M.; Olafsson, I.; Velasco, G.; Grubb, A.; Lopez-Otin, J. Biol. Chem. 266, 20538-20543, 1991
J. Biol. Chem. 266, 20538-20543, 1991
A;Title: Structure and expression of the gene encoding cystatin D, a novel human c
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A;Molecule type: protein
A;Residues: 27-49; XX', 52-64 <OLA>
A;Residues: 27-49; XX', 52-64 <OLA>
A;Residues: 27-49; XX', 52-64 <OLA>
A;Rote: this protein, purified from cerebrospinal fluid of patients with the autosomal A;Note: this protein, Diresent in CSF but is found instead in amyloid deposits edefective gene is not present in CSF but is found instead in amyloid deposits R;Popovic, T.; Brzin, J.; Ritonja, A.; Turk, V.
Biol. Chem. Hoppe-Seyler 371, 575-580, 1990
A;Title: Different forms of human Cystatin C.
A;Reference number: S10607; MUID:91025625; PMID:2222856
A;Accession: S10607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GDB:119817;
A;Map position: 20p11.2-20p11.2
A;Introns: 81/3; 119/3
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R;Berti, P.J.; Storer, A.C.
Biochem. J. 302, 411-416, 1994
A;Title: Local pH-dependent conformational changes leading to proteolytic susceptibility
A;Reference number: S55305; MUID:94379969; PMID:8092991
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A,Title: The disulphide bridges of human cystatin C (gam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 27-49; 106-146 < BER>
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                                                                                                                                                                                                                                                                                                       F;99-109,123-143/Disulfide bonds: #status experimenta
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                                                                                                                                                                                                                                                                                                                                       Superfamily: cystatin; cystatin homology

(Keywords: amyloid; cystatin proteinase inhibitor; extracellular protein; hydroxyproline; (Keywords: amyloid; cystatine proteinase inhibitor)

(1-26/Domain: signal sequence #status predicted <SIG>
(27-146/Product: cystatin C #status experimental <MAT>
(35-146/Domain: cystatin homology <CYS>
(35-146/Domain: cystatin homology <CYS)

(81-85/Region: inhibitory #status predicted
(29/Modified site: hydroxyproline (Pro) (partial) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Comment: This protein is found in the post-gamma-globulin fraction of cerebrospinal fly patients with certain autoimmune diseases.

Comment: This protein is an inhibitor of cysteine proteinases and may serve an importary comment: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral hermorn's
                                                                                                                                                     Macches
                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                     Best Local Similarity
   80
                                                                                                                                                     19;
                                                                   1 RQVTDHLEYHLNVEMQWTTCQK--PETTNC-VPQERELHKQVNCFFSVFAVPW
KOIVAGVNYFLDVBLGRTTCTKTQPNLDNCPFHDQPHLKRKAFCSFQIYAVPW
                                                                                                                                                 Conservative
                                                                                                                                                 27.1%; Score 90.5; DB 1; 35.8%; Pred. No. 0.0012; tive 10; Mismatches 21;
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   132
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M.; Velasco, G.; Dalboge, H.; Grubb,

Escherichia

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A;Gene: GDB:CST2
A;Cross-references: GDB:119816; OMIM:123856
A;Map position: 20p11.2-20p11.2
C;Superfamily: cystatin; cystatin homology
F;30-141/Domain: cystatin homology <CYS>
                                                                                                                                                                                                                                                                 A;Title: Characterization and amino acid sequence of a new acidic cysteine proteinase in A;Reference number: A41422; MUID:88139220; PMID:3436950
A;Accession: A41422
A;Molecule type: protein
A;Residues: 25-141 <ISE>
R;Isemura, S;; Saitoh, E; Sanada, K.; Isemura, M.; Ito, S.
in Cysteinases and Their Inhibitors, Turk, V., ed., pp.497-505, Walter de Gruyt A;Title: Cystatin S and the related cysteine proteinase inhibitors in human saliva.
A;Reference number: A27015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M19673; GB:M19170; NID:g186403; PIDN:AAA36116.1; PID:g386826 A;Note: the authors translated the codon GAC for residue 129 as Asn R;Saitch, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N. Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
A;Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily A;Reference number: S02489; MUID:89076505; PMID:3202964
A;Status: not compared with conceptual translation
A;Status: not compared with conceptual translation
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A;Cross-references: GDB:136380; CMIM:123858
A;Map position: 20p11.21-20p11.21
A;Introns: 77/3; 115/3
C;Superfamily: cystatin; cystatin homology
C;Keywords: cysteine proteinase inhibitor; extracellular protein; saliva
F;1-20/Domain: signal sequence #status predicted <SIG>
F;30-142/Domain: cystatin homology <CYS>
                                                                                                                                                A;Accession: B27015
A;Molecule type: protein
A;Residues: 25-134,'D',136-141
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 21-141 <SA2>
R; Isemura, S.; Saitoh, E.;
J. Blochem. 102, 693-704,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cystatin SA precursor human cystatin SA precursor human cyspecies: Homo sapiens (man) 30-Jun-1989 #text_c C;Date: 31-Mar-1989 #sequence revision 30-Jun-1989 #text_c C;Accession: B29632; S02490; Ā41422; B27015 R;Saitch, E.; Kim, H.S.; Smithies, O.; Maeda, N. Gene 61, 329-338, 1987 Gene 61, 329-338, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: S18212; MUID:92041895; PMID:1939105
A;Accession: S18212
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-45,'C',47-142 <FR2>
A;Cross-references: EMBL:X59964; NID:g30263; PIDN:CAA42590.1; PID:g30264
C;Genetics:
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Best Local :
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Pred. No. 0.0015;
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A; Molecule type: protein A; Residues: 1-111 <RIT> C; Superfamily: cystatin;
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A;Title: Amino acid sequence of a cystatin from venom of A;Reference number: A28793; MUID:88076861; PMID:3500714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cystatin -
C;Species:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: cystatin; cystatin homology F;29-140/Domain: cystatin homology <CYS> F;93-103,117-137/Disulfide bonds: #status |
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Species: Mus musculus (house mouse)
                                       C;ACCession: A01271
R;Hirado, M.; Tsunasawa, S.; Sakiyama, F.; Niinobe, M.; Fujii,
FEBS Lett. 186, 41-45, 1985
                                                                                                  N;Alternate names: thiol proteinase inhibitor C;Species: Bos primigenius taurus (cattle) C;Date: 28-Feb-1986 #sequence_revision 28-Feb
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A;Cross-references: EMBL:M59470; NID:g192911; PIDN:AAA63298.1;
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A;Title: Complete amino acid sequence of bovine colostrum low-M-r cysteine proteinase in A;Reference number: A01271; MUID:85231205; PMID:3891407
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;Species: Bitis arietans (puff adder)
;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 30-Sep-1993
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18; Conserv
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Pred. No.
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2; Mismatches
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Pred. No. 0.0059;
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Pred. No. 0.0034;
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0.0071;
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A; Accession: A01271

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J. Biochem. 96, 489-489, 1984

A,Title: Isolation and amino acid sequence of Sp-1, an acidic protein of human whole sal A;Reference number: A91985; MUID:85054716; PMID:6501254

A;Recession: A01272

A;Mccession: A01272

A;Mccession: A01272

A;Mccession: A01272

A;Mccession: A01272

A;Mccession: A01272

A;Molecule type: protein
A;Residues: 29-134, D',136-141 <ISE>
R;Isemura, S.; Saitch, E; Ito, S.; Isemura, M.; Sanada, K.
J. Biochem. 96, 1311-1314, 1984

A;Title: Cystatin S: a cysteine proteinase inhibitor of human saliva.
A;Reference number: A91981; MUID:85104877; PMID:6394600

A;Reference number: A91981; MUID:85104877; PMID:6394600

A;Reference number: A29603; MUID:87270697; PMID:3394600

A;Accession: A29603

A;Molecule type: protein
A;Residues: 21-51 <HAW>
R;Ramasubbu, M.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.
A;Fitle: Large-scale purification and characterization of the major phosphoproteins and A;Reference number: S19279; MUID:92082469; PMID:1747107

A;Accession: S19280

A;Accession: S19280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:X54667; NID:g30365; PIDN:CAA38478.1; PID:g30366
R;Lamkin, M.S.; Jensen, J.L.; Setayesh, M.R.; Troxler, R.F.; Oppenheim, F.G.
Arch. Biochem. Biophys. 288, 664-670, 1991
A;Title: Salivary cystatin SA-III, a potential precursor of the acquired enamel
A;Reference number: S16500; MUID:91378515; PMID:1898055
A;Accession: S16500
A;Status: preliminary
A;Molecule type: protein
A;Residues: 21-134,'D',136-141 <IHU>
A;Residues: 21-134,'D',136-141 <IHU>
A;Residues: S; Saitch, E; Sanada, K.
I Biochem 96 480-488 1984
A;Status: preliminary
A;Molecule type: protein
A;Residuse: 21-55 <RAM;
A;Residuse: 21-55 <RAM;
A;Residuse: 21-55 <RAM;
A;Chinsson, M.; Richardson, C.F.; Bergey, E.J.; Levine, M.J.; Nancollas,
A;Ch. Oral Biol. 36, 631-636, 1991
A;Title: The effects of human salivary cystatins and statherin on hydroxy
A;Reference number: A56608; MUID:92074898; PMID:1741693
A;Accession: A56608
A;Molecule type: protein
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Biochem. J. 278, 627-635, 1991
A;Title: Human salivary cystatin S. Cloning, sequence analysis, A;Reference number: S17667; MUID:91378918; PMID:1898352
A;Accession: S17667
A;Molecule type: mRNA A;Residues: 1-141 <8085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein
A;Residues: 1-112 <HIR>
C;Superfamily: cystatin; cystatin homology
C;Keywords: colostrum; cysteine proteinase inhibitor
F;2-112/Domain: cystatin homology <CYS>
F;48-52/Region: inhibitory #status predicted
F;66-76,90-110/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N;Alternate names: cystatin S
C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 RQVTDHLEYHLNVEMQWTTCQKPETT--NC-VPQERELHKQVNCFFSVFAVPWFEQYKIL 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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A,Residues: 21-55 <RAM>
C,Comment: Human saliva appears to contain ences. Cystatin SN, with a pI of 7.5, is a
                                                                                                                                                                                                           A;Molecule type: protein
A;Residues: 29-141 <ISB>
A;Residues: 29-141 <ISB>
R;Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.
Biochem. J. 280, 341-352, 1991
A;Title: Large-scale purification and characterization of the major phosphoproteins a
A;Reference number: S19279; MUID:92082469; PMID:1747107
                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Characterization of a new cysteine proteinase inhibitor of human saliva, cystat: A;Reference number: A01273; MUID:86164938; PMID:3514272 A;Accession: A01273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: DNA
A;Residues: 1-86,'I',88-141 <SAI>
R;Isemura, S; Saitoh, E.; Sanada,
FEBS Lett 198, 145-149, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: DNA
A;Residues: 21-141 <SA2>
A;Residues: 21-141 <SA2>
R;Saitoh, E.; Kim, H.S.; Smithies, O.; Maeda, N.
Gene 61, 329-338, 1987
A;Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three
A;Reference number: A91589; MUID:88185836; PMID:3446578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:J03870; NID:g337751; PIDN:AAA60299.1; PID:g337752 R;Saitch, E.; Jeemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N. Biol. Chem. Hoppe-Seyler 369, 191-197, 1988 A;Title: Cystatin superfamily. Evidence that family II cystatin genes are A;Reference number: S02489; MUID:89076505; PMID:3202964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 28-May-1986 #sequence_revision 08-Peb-1996 #text_change 08-Dec-2000 C;Accession: A28110; S02489; A29632; A01273; S19279 R;Al-Hashimi, I; Dickinson, D.P.; Levine, M.J. J. Bold. Chem. 263, 9381-9387, 1988 J. Britle: Purification, molecular cloning, and sequencing of salivary cystatin SA-I. A;Reference number: A28110; MUID:88243825; PMID:2837486 A;Accession: A28110
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C;Keywords: cysteine proteinase inhibitor; phosphoprotein; saliva
C;Keywords: cysteine proteinase inhibitor; phosphoprotein; saliva
F;1-20/Domain: signal sequence #status predicted <NAT>
F;21-141/Product: cystatin S #status predicted <MAT>
F;30-141/Domain: cystatin homology <CYS>
F;76-80/Region: inhibitory #status predicted
F;94-104,118-138/Disulfide bonds: #status predicted
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A;Rote: sequence extracted from NCBI backbone (NCBIP:67866)
A;Note: authors desigate form without phosphate as cystatin
C;Comment: This protein strongly inhibits papain and ficin,
                                                                                                                 A;Status: preliminary
A;Molecule type: protein
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A; Residues: 1-141 < ALH>
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A;Map position: 20p11
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32.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>~</u>
                          much better inhibitor of papain and dipeptid
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                                                                                                                                                                                                                                                   major phosphoproteins and
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N,Alternate names: cysteine proteinase inhibitor
C;Species: Oncorhynchus keta (chum salmon)
C;Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 16-J
C;Accession: JC2040
R;Koide, Y: Noso, T.
Biosci. Biotechnol. Biochem. 58, 164-169, 1994
A;Title: The complete amino acid sequence of pituitary cystatin from A;Reference number: JC2040; MUID:94162738; PMID:7764512
A;Accession: JC2040
A;Molecule type: protein
A;Residues: 1-111 <KOI>
C;Comment: The intracellular role of this protein is the inhibition C;Superfamily: cystatin; cystatin homology
C;Keywords: cystatin proteinase inhibitor
F;2-111/Domain: cystatin homology <CYS-
F;48-52/Region: inhibitory
F;89-109/Disulfide bonds: #status experimental
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A;Cross-references: GDB:119815; OMIM:123855
A;Map position: 20p11.2-20p11.2
C;Superfamily: cystatin; cystatin homology
C;Superfamily: cystatin; cystatin homology
C;Superfamily: cystatin sequence #status predicted <SIG>
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-141/Product: cystatin SA-I #status experimental <MATI>
F;29-141/Product: cystatin SM #status experimental <MATI>
F;30-141/Domain: cystatin homology <CYS>
F;30-141/Domain: cystatin homology <CYSP
F;30-141/Domain: cystatin SM-I #status predicted
F;94-104,118-138/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
T23130
A;Reference number: Z20029
A;Accession: T25403
A;Status: preliminary; tran
A;Molecule type: DNA
                                                                                                                                                                                                submitted to the EMBL Data Library, December 1997
A;Reference number: Z19690
A;Recession: T23130
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1779 <WIL-
A;Cross-references: EMBL;AL021066; PIDN:CAA15925.1; GSPDB:GN00019; CESP:T28B8.4
                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence revision 15-Oct-1999 #text_change 15-Sep-2000
C;Accession: T23130; T25403
R;White, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
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                                                                                                                  submitted to the EMBL Data Library, October 1996
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Best Local S
Matches 16
                                                                                                                                                                              Experimental source: clone H31B20
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ROVIDHLEYHLNVEMOWTICOK--PETTNCVPQERELHKQVNCFFSVFAVPWFBQYKIL 57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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                                 translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21.6%; Score 72; DB 1
27.1%; Pred. No. 0.15;
tive 14; Mismatches
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F;19-331/Product: LMW kininogen II #status predicted <MAT>
F;19-377/Product: LMW kininogen I heavy chain #status predicted <HCH>
F;19-377/Product: LMW kininogen I heavy chain #status predicted <HCH>
F;19-130/Domain: cystatin homology <CY1>
F;141-252/Domain: cystatin homology <CY2>
F;377-386/Product: lysyl-bradykinin (kallidin II) #status predicted <KBDY>
F;377-386/Product: bradykinin (kallidin I) #status predicted <BDY>
F;378-386/Product: LMW kininogen I light chain #status experimental <LCH>
F;387-434/Product: LMW kininogen I light chain #status experimental <LCH>
F;377-404,82-93,106-125,141-144,205-217,228-247,261-264,325-337,348-367/Disulfide bonds: #F;47,87,168,169,197,204,280/Binding site: carboxylic acid (Gln) (in mature form) #status predicted F;380/Modified site: 4-bydroxyproline (Pro) #status predicted F;380/Modified site: 4-bydroxyproline (Pro) #status predicted F;380/Modified site: Arg-Ser (kallikrein) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:V00427; GB:J00011; NID:g489; PIDN:CAA23710.1; PID:g490 C;Comment: The LMW kininogen precursor is produced from the same gene as the HMW form as C;Comment: Kininogen is a cysteine proteinase inhibitor, takes part in initiation of the C;Comment: Bradykinin, released from kininogen by kallikrein, is a potent vasodilator, ir xyproline residue is present in the kininogen prior to the release of bradykinin. C;Superfamily: kininogen; cystatin homology C;Superfamily: kininogen; cystatin homology C;Keyvords: alternative splicing; blood coagulation; cysteine proteinase inhibitor; glycc C;Keyvords: alternative splicing; blood coagulation; cysteine proteinase inhibitor; glycc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Nawa, H.; Kitamura, N.; Hirose, T.; Asai, M.; Inayama, S.; Nakanishi, S. Proc. Natl. Acad. Sci. U.S.A. 80, 90-94, 1933 A;Title: Primary structures of bovine liver low molecular weight kininogen precursors and A;Reference number: A93984; MUID:83117859; PMID:6572010 A;Accession: A01284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kininogen, LMW II precursor - bovine
N;Alternate names: alpha-2-thiol preciase inhibitor; preprokininogen
N;Contains: bradykinin (kallidin); kininogen I; kininogen II; prokininogen
C;Species: Bos primigenius taurus (cattle)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 28-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Map position: 1
A;Introns: 161/2; 223/2; 309/3; 332/2; 547/3; 603/1; 657/3;
C;Superfamily: Caenorhabditis elegans hypothetical protein
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A;Cross-references: EMBL:Z81133; PIDN:CAB03445.1; GSPDB:GN00019; CESP:T28B8.4
A:Cross-imental source: clone T28B8
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A; Residues: 1-434 < NAW>
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364 TVN 366
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                                                                                                                                   QVVGGLKYSIVFIARETTCSKGSNEELTKSC---EINIHGQILHCDANVYVVDWEEKVYP 363
                                                                                                                                                                                                     QVTDHLEYHLNVEMQWTTCQKPE----TINCVPQERELHKQV-NCFFSVFAVPWFEQ-YK 55
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ditis elegans hypothetical protein T28B8.3
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Pred. No. 1.
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YXX5 CABEL
YDH2 XANAU
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  P32766
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Q951114
P011031
P114841
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088969
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2 oryctolagus
1 rattus norv
                                                                            mus musculu
n homo sapien
cyprinus ca
homo sapien
bos taurus
bos taurus
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homo sapien
macaca mula
                   oncorhynchu
oncorhynchu
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coturnix co
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sapien
us gall
  RESULT 1

(S311 HUMAN STANDARD; PRT; 137 AA. ID CS11 HUMAN STANDARD; PRT; 137 AA. AC 09H112; Q9H113;

DT 28-FEB-2003 (Rel. 41, Created)

DT 28-FEB-2003 (Rel. 41, Last sequence update)

DT 28-FEB-2003 (Rel. 41, Last annotation update)

DE Cystatin 11 precursor.

CST11 OR CST81.
                                                                                                                                                                                                                                                                                                              RX MEDLINE=21638749; Pubmed=11780052;
RX MEDLINE=21638749; Pubmed=11780052;
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Coulson A., Craiffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hummond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Nistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Rice C.M., Ross M.T., Scott C.B., Sehra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Teeb L., Thomas D.W., Thorpe A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Milnesd J., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Milnesd J., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rogers J.;
"The DNA sequence and comparative analysis of human chromosome 20.";
Nature 414:865-871(2001).
-I- SUBCELLULAR LOCATION: Secreted (Potential).
-I- ALTERNATIVE PRODUCTS:
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                          IsoId=Q9H112-2; Sequence=VSP_001260;
Note=No experimental confirmation available;
-i- SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                          SUBCELLULAR LOCATION: Secreted (Potential).
ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Named isoforme-
Name=1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IsoId=Q9H112-1; Sequence=Displayed;
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Result No.

Score

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Minimum Maximum

DB 08

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Total number

Title: Perfect score:

Run on: OM protein -

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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Butt C., Fletcher C., Fujita M., Gariboldi M.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Buzuki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Wanshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Havashiraki Y., Storch M., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local S
Matches 59
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CS11 MOUSE
Q9D269;
28-FEB-2003
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DISULFID
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                                                "Functional annotation of a full-length mouse Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AL096677; CAC13170.1; -.
EMBL; AL096677; CAC17423.1; -.
HSSP; P01038; 1A90.
Genew; HGNC:15959; CST11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                    Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=C57BL/6J; TISSUE=Epididymis; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cystatin 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003
10-OCT-2003
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                SUBCELLULAR LOCATION: Secreted (Potential). SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protease inhibitor;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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              Belongs to the cystatin family.
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Rodentia;
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Signal; Alternative
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annotation
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smatches 0;
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30-MAY-2000
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                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                              "Structure, alternative spining of the cystatin-related epididymal spermatogenic Biochem. J. 340:85-93(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Structure, alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Sprague-Dawley; TISSUE=Ep
MEDLINE=99247899; PubMed=1022966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
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SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATJ
                                                                                                                                         or send an email to license@isb-sib.ch).
                                                                                                                                                            entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CST8 OR CRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cystatin-related epididymal spermatogenic protein precursor (Cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10116;
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36; Conserv
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(Rel. 39, Last sequence update)
(Rel. 42, Last annotation updat
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Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                            a specialized role during sperm
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CYSTATIN 11.
SECONDARY AREA OF C
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC.
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Pred. No. 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               H.G.;
ig and chromosomal localization
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ches 13;
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(See http://www.isb-sib.ch/announce/
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                                                                                                                                                               http://www.isb-sib.ch/announce/
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EMBL; AF090692; HSSP; P01034; 10

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AAC36317.1; -.

InterPro; IPR000010; Pfam; PF00031; cysta

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Best Local S
Matches 25
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Zu-FEB-2003 (Rel. 41, Last s
Cystatin-related epididymal s,
related epididymal specific
CST8 OR CRES.
Mus musculing
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DISULFID
DISULFID
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SEQUENCE
                                                               This SWI
                                                                                                                                                                                                                                              "The CRES gene: a unique testis-regulated family is highly restricted in its express of the mouse epiddymis.",
Mol. Endocrinol. 6:1653-1664(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P32766; 089102;
01-OCT-1993 (Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
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                                       use
                                                    the
                                                                                                                                                                                                                                                                                       TISSUE=Epididymis;
MEDLINE=93078799; PubMed=1280328;
Cornwall G.A., Orgebin-Crist M.-C.,
"The CRES gene: a unique testis-reg
                                                                                                                                                                                                                                                                                                                                                                  cystatin-related epididymal spermatogenic Biochem. J. 340:85-93(1999).
                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=99247899; PubMed=10229662; Cornwall G.A., Hsia N., Sutton H.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                          Cornwall G.A., Hsia N., Sutton H.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C3H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CST8_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
            s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Ew Buropean Bioinformatics Institute. There are no restr by non-profit institutions as long as its content ified and this statement is not removed. Usage by and ities requires a license agreement (See http://www.isb-sities requires a license agreement
                                                                                                                                                                                           maturation.
SUBCELLULAR LOCATION: Secret.
TISSUE SPECIFICITY: Proximal
                                                                                                      of CRES gene expression.
SIMILARITY: Belongs to t
                                                                                                                             exclusively synthesized by the proximal caput epithelium INDUCTION: Testicular factors or hormones other than and present in the testicular fluid may be involved in the re
                                                                                                                                                                               TISSUE SPECIFICITY: Proximal caput region of the expression in the testis. Within the testis it
                                                                                                                                                                                                                                     FUNCTION: Performs a
                                                                                                                                                                   elongating spermatids, whereas within the epididymis it is
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3H, and CD-1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QVTDHLEYHLNVEMQWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN
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                                                                                                     Belongs to the cystatin family.
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specific protein) (Cystatin 8).
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139
  license agreement (
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41.0%;
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annotation update)
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BY SIMILARITY.
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N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 143.5; DB 1;
Pred. No. 9.2e-11;
9; Mismatches 14;
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CYSTATIN-RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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expression
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              (See http://www.isb-sib.ch/announce,
                        There are no restrictions ng as its content is in ved. Usage by and for con
                                                                                                                                                                                                                                  during
                                                                                                                                                                                                                                                                                                                                                                             gene.";
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                                                         ced through a collaboration and the EMBL outstation -
                                                                                                                                                                                the epididymis. it is localized
                                                                                                                                                                                                                                  sperm
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                                                                                                                             than androgens in the regulation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Murinae; Mus
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Best Local :
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MEDLINE-21618/49; runneu-to-color delayer dela
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30-MAY-2000
28-FEB-2003
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CONFLICT
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EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Transient appearance caput epididymal sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            060676;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cystatin-related
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HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cornwall G.A., Hann S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95344753; PubMed=7619504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
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(Rel. 39, Last sequence update)
(Rel. 41, Last annotation update)
;lated epididymal spermatogenic protein precursor (Cystatin
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41:37-46(1995).
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Cystatin-like )
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                                                                                                     HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a licenne agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 414:865-871(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genew; HGNC:2480; CST8.
GO; GO:0004869; F:cysteine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00031; cystatin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                           VARIANT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exclusively synthesized by the proximal caput epithelium.

SIMILARITY: Belongs to the cystatin family.

SWISS-PROT entry is common to the epididymis it is supposed by the cystatin family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protease inhibitor;
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39.3%;
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                 sequence update)
annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        SECONDARY AREA OF CONTACT (POTENTIAL) BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                       Score 112.5;
Pred. No. 6.
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N-LINKED (GLCNAC. ..)
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/FTId=VAR_014527.
                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                           9A3512757E0F4ECD CRC64;
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                                                                                   165
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RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Chapman J.C., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Collson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Hammond S., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Rice C.M., Ross M.T., Scott C.B., Schra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Tee J., Thomas D.M., Thorpe A.,
RA Milneid S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
Whitehead S.L., Whittaker P., Willey D.L., Walliams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
  Matches
                  Query Match
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                                                                                                                                                                                                                                                                                 SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "The DNA sequence and comparative analysis of human Nature 414:865-871\,(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jones M., Stavrides G., Almeio
Bailey J., Barlow K.F., Bates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=21638749; PubMed=11780052;
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Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                        SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                      Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement
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    -!- SIMILARITY: Belongs to the cystatin family.

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  19;
                                                                                                                                                                                                                                                                                                                                                                                                    HGNC:15958; CSTL1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an email to license@isb-sib.ch).
                    Similarity
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118
118
  Conservative
                                                                                                                                                                                                                                                                                                                                          inhibitor;
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Primates;
                33.2%;
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                                                                                                                                                                                                                                                                                                                                             Signal.
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Score 111; DB Pred. No. 1.1e
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                                                                                9D66D685875DAEEA
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                                                                                               (See http://www.isb-sib.ch/announce/
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L.1e-06;
hes 21;
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CYT_CHICK
P01038;
                                                                         X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
MEDLINE=89052676; PubMed=3191914;
Bode W., Engh R., Musil D., Thiele U., Huber R., Karshikov.
Brzin J., Kos J., Turk V.;
"The 2.0 A X-ray crystal structure of chicken egg white cys
its possible mode of interaction with cysteine proteinases.
EMBO J. 7:2593-2599(1988).
                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=83256421; PubMed=6409085;
Anastasi A., Brown M.A., Kembhavi A.A., Nicklin M.J.H.,
Sunter D.C., Barrett A.J.;
"Cystatin, a protein inhibitor of cysteine proteinases.
"Cystatin, a protein inhibitor of cysteine proteinases.
"Cystation from egg white, characterization, and detec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=90008873; PubMed=2793849;
Colella R., Sakaguchi Y., Nagase H., Bi
"Chicken egg white cystatin. Molecular
and tissue distribution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cystatin precursor (syg-
Gallus gallus (Chicken).
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CHARACTERIZATION OF PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=84178305; PubMed=6712597; Schwabe C., Anastasi A., Crow H., M "Cystatin. Amino acid sequence and Biochem. J. 217:813-817(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 01, Creat 01-OCT-1989 (Rel. 12, Last 28-FEB-2003 (Rel. 41, Last
            Dieckmann T., Mitschang L., Hofmann M.,
Auerswald E.A., Jeanicke R., Oschkinat )
                                                                                                                                                                                                                                   MEDLINE=89252033; PubMed=2721673;
Laber B., Krieglstein K., Hensche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of cystatin from (
Hoppe-Seyler's Z.
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Machleidt W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=84110059; PubMed=6662498;
                                    MEDLINE=94087719; PubMed=8263912;
                                                 STRUCTURE BY NMR.
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                                                                                                                                                                                                          cysteine proteinase inhibitor chicken cystatin
                                                                                                                                                                                                                                                                                                                                                                                 serum."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitors of cysteine proteinases. III. Amino-acid tin from chicken egg white.";
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                                                                                                                                                                                                                                                                                                                             Loefberg
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s of human cys
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l. Chem. 364:1487-1496(1983)
phosphorylated
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                                                                                    chicken egg white cystatin cysteine proteinases.";
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                       Ков J.,
chicken cystatin and of
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16-OCT-2001

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J. Mol. Biol. 234:1048-1059(1993).

-I- FUNCTION: This protein binds tightly to and inhibits a variety thiol proteases including ficin, papain, and cathepsins B, C, F, and L. Although isolated from egg white, it is also present in
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SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
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PDB; 1A67; 27-MAY-98.
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22; Conserv
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Pred. No. 2.4e
11; Mismatches
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Oryctolagus cuniculus (Rabbit). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.

Cystatin

precursor.

update

SEQUENCE FROM N.A.

NCBI_TaxID=9986;

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RESULT
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  "Rat cystatin C: the complete amino acid sequence N-glycosylation.";
Biol. Chem. Hoppe-Seyler 371:161-166(1990).
                                                                                                                                                                                                                                                                                                        MEDLINE=90092122; PubMed=2689174; Cole T., Dickson P.W., Esnard F., Gauthier F., Schreiber G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'RA
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Genes Cells 3:459-475(1998).
-!- FUNCTION: This is a thiol pro-
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                                                                            MEDLINE=90380276; PubMed=2400577; Esnard F., Esnard A., Faucher D., Brillard M., Gauthier F.;
                                                                                                                                                                                                                                                   "The cDNA structure and expression analysis of the genes for the cysteine proteinase inhibitor cystatin C and for beta 2-microglo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
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Kawashima H.;
                                                                          Brillard M.,
                                                                                                                                                    SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=Buffalo;
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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19; Conserv
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Gauthier
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7; CYSTATIN;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
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Pred. No. 3.4e-05;
7; Mismatches 21;
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                                                                                                  Capony J.-P.,
                                                                                                                                                                                                                                                                                                                                Averill F.,
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01903;
15-JUL-1998
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CYStatin C pi
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CONFLICT
SEQUENCE
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ACT SITE
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MEDLINE-88313020; PubMed=3044831;
Bsnard A., Esnard F., Faucher D., Gaut
"Two rat homologues of human cystatin
FEBS Lett. 236:475-478 (1988).
                                                       Saimiri sciureus (Common squirrel monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Platyrrhini; Cebidae;
                                                                                                                                                                                                                                                                                                                                                                                                NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                       Thiol
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PIR; S10587; S10587.
HSSP; P01034; 1G96.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=92225121; PubMed=1563513;
Esnard A., Esnard F., Guillou F., Gauth
"Production of the cysteine proteinase
                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X16957; CAA34831.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement
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 MEDLINE=97054523; PubMed=8898820; Wei L.H., Walker L.C., Levy E.;
                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEBS Lett.
                                           NCBI_TaxID=9521;
                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00031; cystatin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regulator of this enzyme activity.
                                                                                                                                                                                                                                                                                                                                                                                                                       protease
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                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                       KQLVAGINYYLDVEMGRTTCTKSQTNLTNCFFHDQFHLMRKALCSFQIYSVFW
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                                                                                                                                                                                                                                                                     Conservative
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W; 78F70158B7925853
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Pred. No. 3.9e
L2; Mismatches
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Cebinae; Saim
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InterPro; IPR000010; Cystatin Pfam; PP00031; Cystatin; 1.
SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN; 1
Thiol protease inhibitor; Phc ACT_SITE 9
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P81061;
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                                                                                                                                                                                                                                                                                            MEDLINE=97420480; PubMed=9276465; Gerhartz B., Engh R.A., Mentele R., Eckerskorn C., Torquato R., Wittman J., Kolb H.J., Machleidt W., Fritz H., Auerswald B.A.; "Quail cystatin: isolation and characterisation of a new member of the cystatin family and its hypothetical interaction with cathepsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-1998 (Rel. 36, Created 15-JUL-1998 (Rel. 36, Last se 15-JUL-1998 (Rel. 41, Last an Cystatin (Egg-white cystatin)
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                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Egg white;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=93934;
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                                                                                                                        SIMILARITY: Belongs to P; P01038; 1CEW. erPro; IPR000010; Cystat
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SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                       cathepsin
                                                                                                                                                                                                                            FUNCTION: This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: As an inhibitor of cysteine
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P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00031; cystatin; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ROVIDHLEYHLNVEMQWITCQK--PETINCVPQER-ELHKQVNCFFSVFAVPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                            412:551-558(1997).
DN: This protein binds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          146
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37
85
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143
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37.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Amyloid, Signal.
BY SIMILARITY.
CYSTATIN C.
REACTIVE SITE.
SECONDARY AREA OF C.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Œ;
     Phosphorylation.
REACTIVE SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .'
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Pred. No. 0.00014;
0; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                              cystatin family
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Best Local :
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                                                                                            Dickinson D.P., I
"Acquisition of c
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10-OCT-2003 (Rel. 42, Last amnotation update)
Cystatin C precursor (Neuroendocrine basic po
SEQUENCE FROM N.A. MEDLINE=21638749; Publ Deloukas P., Matthews
                                                                                                                                                                                                                                    "The human cystatin C gene (CST3) is a member family which is localized on chromosome 20."
                                                                                                                                                                                                                                                                           Saitoh E., Sabatini I
Isemura S., Sanada K.
                                                                                                                                                                                                                                                                                                                                                                                                            "Stroke in Icelandic prelated to a mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Abrahamson M., Grubb A., Olafsson I., Lundwall A.;
"Molecular cloning and sequence analysis of cDNA coding for
precursor of the human cysteine proteinase inhibitor cystati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
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21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                              Submitted
                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                 Biochem. Biophys. Res.
                                                                                                                                                                                                                                                                         Isemura S.,
                                                                                                                                                                                                                                                                                                                  MEDLINE=89350949;
                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                              cysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=90303202; PubMed=2363674;
Abrahamson M., Olafsson I., Palsdottir A., Ulvsbaeck M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Leukocyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Placenta;
MEDLINE=87219149; PubMed=3495457;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Levy E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=89235594; PubMed=2541223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Structure and expression of the Biochem. J. 268:287-294(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jensson O., Grubb A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                               , Lopez-Otin C., Ghiso J., Geltner D., in Icelandic patients with hereditary to a mutation in the cystatin C gene,
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                                                                              (NOV-2000)
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                                                                                                                 complex patterns
populations durir
                                                                                                                                                      Hewett-Emmett D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01,
PubMed=11780052;
hews L.H., Ashurs
                                                                                                                                                                                                                                                                                           PubMed=2764935;
ni_L.M., Eddy R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HCHWA VARIANT).
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                                                                                                                                                                                                                                                      gene (CST3) is a member of the
                                                                                                                                                                                                               Commun. 162:1324-1331(1989)
                                                                              the
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during the evolution
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Pred. No. 0.00
13; Mismatches
  Ashurst
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RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Clegg S., Cobley V.B., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.B., Collier R.E., Connor R.E., Corby N.R.,
RA Clington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Clington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Carafham D.V., Griffiths C., Griffiths M.D., Gwilliam R., Hall R.E.,
RA Grafham D.V., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
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RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Wilming L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Mithebead S.L., Whittaker P., Willey D.L., Williams S.A.,
RA Rogers J.;
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A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B., Butow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
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A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
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A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
A Roha S.S., MocEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
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A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
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A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
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SEQUENCE OF 27-146.
Sequence of 27-2268; PubMed=6283552;
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DISULFIDE BONDS
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Turk V., Brzin J., Longer M., Ritonja A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Human gamma-trace, a basic microprotein: amino acid sequence and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the adenohypophysis Acad. Sci. U.S.A. 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Longer
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                                                                             inhibitor of cysteine 118:103-109(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eropkin M., Borchart U.,
                                                                                                                      proteinases.";
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Hereditary cystatin C amyloid angiopathy: identification of the "Hereditary cystatin C amyloid angiopathy: identification of the disease-causing mutation and specific diagnosis by polymerase chain reaction based analysis.",

Hum. Genet. 89:377-380(1992).

-!- FUNCTION: As an inhibitor of cysteine proteinases, this protein thought to gerve an important physiological role as a local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cystatin.";
FEBS Lett.
                                       CHAIN
ACT_SITE
                                                                                                                                                                                                                                       entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Human cystatin C, an amyloidogenic
three-dimensional domain swapping.";
Nat. Struct. Biol. 8:316-320(2001).
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Abrahamson M., Jaskolski M.,
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MEDLINE=21173909; PubMed=11276250;
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DISULFID
                                                                                                                          SMART;
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             DISULFID
                                                                                                                        Pfam; PF00031; cystatin;
SMART; SM00043; CY; 1.
                                                                                                                                                                    MIM; 105150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "The disulphide bridges of human cystatin C (gamma-trace) and chicken
                                                                    SIGNAL
                                                                                Polymorphism;
                                                                                                             PROSITE; PS00287;
                                                                                                                                                                                                Genew;
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                                                                                                                                                       interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 regulator of this enzyme activity.
SUBUNIT: Homodimer.
TISSUE SPECIFICITY: Expressed in highest levels in the epididymis, vas deferens, brain, thymus, and ovary and the lowest in the
                                                                                                                                                                                                                                                                           X05607; CAA29096.1;

X52255; CAA36497.1;

W27891; AAA52164.1;

M27899; AAA52164.1;

M27890; AAA52164.1;

M27890; AAA52164.1;

X61681; CAA43856.2;

X61682; CAA43856.2;

X61683; CAA43856.2;

X61683; CAA43856.2;

X61683; CAA43856.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       characteristics of amyloid.
SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vas deferens, brain, thymus, and ovar
submandibular gland.
DISEASE: Defects in CST3 are a cause
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hemorrhage with amyloidosis (HCHWA) [MIM:105150]; also known cerebral amyloid angiopathy (CAA) or cerebroarterial amyloido Icelandic type. HCHWA is characterized by a thickening of the cerebral arteries walls with deposition of material with the
                                                                                                                                                                                                                                                    AF319564;
AL121894;
                                                                                                protease inhibitor; Amyloid;
                                                                                                                                                                                                                                          BC013083;
                                                                                                                                                                                              HGNC: 2475;
                                                                                                                                                                                                                                                                                                                                                                                                          requires a license agreement (S
an email to license@isb-sib.ch).
                                                                                                                                                                                           ; 06-APR-01.
NC:2475; CST3.
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 27
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                                                                                  3D-structure
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146
37
85
109
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                          CYSTATIN C.
REACTIVE SITE.
SECONDARY AREA
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Query Match

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RA Jones M., Stavrides G., Almeida J.P., Babage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chegg S., Cobley V.E., Collier R.P., Cornor R.E., Corby N.R.,
Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Cligg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath R.E., Jekosch R., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Mine S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Mine S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Rice C.M., Rose M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Kuce C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
RA Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
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Grubb A., Lopez-Otin C.;
"Human cystatin D. cDNA cloning, characterization of the Escherichia "Human cystatin D. cDNA cloning, characterization of the native protein in annual annu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=92041895; PubMed=1939105; MEDLINE=92041895; PubMed=1939105;
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01-DEC-1992 (Rel.
28-FEB-2003 (Rel.
VARIANT ARG-46.
MEDLINE=93186144;
Balbin M., Freije
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=93340179; PubMed=8340398; Freije J.P., Balbin M., Abrahamson M., Velasco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Structure and expression of the gene human cysteine proteinase inhibitor."; J. Biol. Chem. 266:20538-20543(1991).
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Mammalia; Eutheria;
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19; Conservative
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24,
PubMed=8444475;
J.P., Abrahamso
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Primates;
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0; Mismatches 21;
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  Velasco
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  Lopez-Otin
                                                                                                                          chromosome 20.";
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Matches
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01902;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last seq
28-FEB-2003 (Rel. 41, Last ann
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DISULFID
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SEQUENCE FROM N.A.
MEDLINE=97054523; PubMed=8898820;
Wei L.H., Walker L.C., Levy E.;
                                                                                                                       Macaca mulatta (Rhesus macaque).
Eukaryota; Metazoa; Chordata; Cr
Mammalia; Euthoria; Primates; Ca
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                    MACMU
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InterPro; IPR000010; Cystatin.
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SMART; SM00043; CY; 1.
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HSSP; P01034; 1G96.
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Pred. No. 0.00
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                                                                                                                                                    Catarrhini;
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CEFA89BA87A0DA68
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FUNCTION: Cysteine proteinase inhibitor that possibly plays a protective role against proteinases present in the oral cavity. TISSUE SPECIFICITY: Expressed in parotid gland but not in seminal vesicle, prostate, epididymis, testis, ovary, placenta, thyroid, gastric corpus, small intestine, liver, or gall bladder tissue. SIMILARITY: Belongs to the cystatin family. cystatin D the protein level."; gene resulting ä an

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inhibitor activity;

C -> R (IN 45% OF Polymorphism (BY SIMILARITY).
A OF CONTACT. SHI CRC64; POPULATION;

DB 1;).00043; hes 26; Length Indels u T Gaps

Craniata; Vertebrata; Euteleostomi; Catarrhini; Cercopithecidae;

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RESULT 15
CYTC MOUSE
ID CYTC M
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Best Local S
Matches 19
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SITE
                                                                STRAIN=129/Sv; TISSUE=Liver;
MEDLINE=95197392; PubMed=7835704;
Huh C., Negle J.W., Kozak C.A., Abrahamso
"Structural organization, expression and
mouse cystatin-C-encoding gene (Cst3).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
SEQUENCE
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 SEQUENCE FROM N.A.
STRAIN=ILS, and ISS;
MEDLINE=21363810; PubMed=11471062.
                                                                                                                                                                           wortem M., Rawson C., Lindburg K., Barnes D.;
"Transforming growth factor beta regulates cystatin mouse embryo (SFME) cells.";
                                                                                                                                                                                                        STRAIN=BALB/c; TISSUE=Brain;
MEDLINE=91054522; PubMed=2241983;
Solem M., Rawson C., Lindburg K.,
                                                                                                                                                                                                                                                                                                                                                                                       P21460;
01-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                    Cystatin C
CST3.
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10-OCT-2003
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SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTAT
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                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                    Biochem.
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(Rel. 42, Last ann
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CYSTATIN C.
REACTIVE SITE.
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ogical role as a local
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SALALA AND PARKARAN BERKERAN B
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RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Collector M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casrninci P., Prange C.,
RA Raha S.S., McEwan P.J., McKernan K.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gunarathe P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Haley J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Balkesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Bolakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Bolakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RG Schherch A., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.;

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
     Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                        EMBL; U10098; AAB41056.1;
EMBL; AF483486; AAL90760.1;
EMBL; AF483487; AAL90761.1;
EMBL; BC002072; AAH02072.1;
PIR; A36163; A36163.
                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "High-throughput sequence identification within alcohol-related QTLs.";
Mamm. Genome 12.657
                                                                                                                                     DISULFID
DISULFID
                                                                                                                                                                       SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                  CONFLICT
                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ehringer M.A.,
                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                  Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                        HSSP; P01034; 1G96.
MGD; MGI:102519; Cs
                                                                                                                                                                                                                                                Thiol
                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                        interPro; IPR000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: As an inhibitor of cysteine proteinases, thought to serve an important physiological role arregulator of this enzyme activity.
                                                                                                                                                                                          SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: Belongs to the cystatin family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M59470; AAA63298.1;
                                                                                                                                                                                                                                              protease
       l Similarity
19; Conserv
                                                                                                                                                                                                                                                                   PS00287;
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21
31
75
93
117
16
16
84
140 AA;
     Conservative
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                                                                                                                                                                                                                                                inhibitor;
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                                                                                                                                                                                                                                                                   CYSTATIN; 1.
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31
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                      26.5%;
35.8%;
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         12;
                                                                          CYSTATIN C.
REACTIVE SITE.
SECONDARY AREA OF CC
BY SIMILARITY.
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A -> G (IN REF. 1).
L -> F (IN REF. 1).
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Score 88.5; pe
Pred. No. 0.000
12; Mismatches
     DB 1;
0.0056;
les 19;
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         Indels
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         Gaps
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Search completed: March 23, 2004, 17:11:07 Job time: 7.66527 secs

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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
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!:
         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: sp_archea:*
2: sp_bacteria:*
3: sp_fung1:*
4: sp_numan:*
5: sp_invertebrate
6: sp_mammal:*
7: sp_mhc:*
9: sp_phage:*
10: sp_plant:*
11: sp_votent:*
12: sp_virus:*
13: sp_vertebrate
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length: 2000000000
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334
1 RQVTDHLEYHLNVEM
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Match
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sp_organelle:*
sp_phage:*
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sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
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sp_mammal:*
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       GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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Q7z4j8 homo sapien
Q9cx46 mus musculu
Q8vii3 mus musculu
Q9jm84 mus musculu
Q9ym84 mus musculu
Q8vih8 rattus norv
Q9qxL5 mus musculu
Q9dan8 mus musculu
Q8vii2 rattus norv
Q44421 drosophila
                                                                                                                                                                                                    Q8wxu5 homo sapien
Q9dap1 mus musculu
Q80zn5 mus musculu
Q80y72 mus musculu
Q9epx9 mus musculu
                                                                                                                                                                                                                                                                                                                    Q8wxu6 homo sapien
Q8k5a3 rattus norv
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60	60	60	60	60	60	60	60	60	60	60	60	60	60.5	60.5	61	61	61.5	61.5	61.5	63	63	•	63.5	65	65.5	65.5	7	69
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3411	3411	3411	3411	3411	3411	3411	3411	905	400	174	112	112	1717	144	447	322	1720	498	127	593	564	633	314	311	149	146	149	1779
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Q9YWN2	Q89277	Q89278	TNMA60	ONMA60	Q89275	Q89276	091857	Q9W9I1	Q8UVR3	056327	Q98SR3	Q98SR4	Q94BM1	Q8JFU5	Q9QAX5	Q8DAX4	Q94BM2	Q94BM0	Q9U9A1	Q917D7	Q95TI1	Q9USA9	Q7SXK6	Q7TR18	Q9D1B1	Q8K397	Q8VHC1	018150
Q9ywn2 yellow feve	-	•	Q9ywn1 yellow feve	Q9ywn0 yellow feve	_	Q89276 yellow feve	-	Q9w9i1 yellow feve		056327 simian viru		Q98sr4 acipenser s		Q8jfu5 brachydanio	Q9qax5 sitiawan vi	Q8dax4 vibrio vuln		Q94bm0 hordeum vul		Q9i7d7 drosophila	Q95til drosophila	3	Q7sxk6 brachydanio	Q7tr18 mus musculu	Q9d1b1 mus musculu	Q8k397 mus musculu	Q8vhc1 rattus norv	O18150 caenorhabdi

ALIGNMENTS

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RESULT 2
Q8K5A3
ID Q8K5
AC Q8K5
DT 01-0
DT 01-0
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Q8WXU6
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Best Local S
Matches 59
 Q8K5A3;
01-OCT-2002
01-OCT-2002
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01-MAR-2002
01-JUN-2003
                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;

Hamil K.G., Liu Q., Zhang Y.-L., French P.S., Hall S.H.;

"SC13: A novel epididymal specific member of the cystatin family.";

Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF335480; AAL71991.1; -.

CO; GO:0004489; F:cystatine protease inhibitor activity; IEA.

InterPro; IPR000010; Cystatin.

Pfam; PF00031; Cystatin; 1.

SMART; SM00043; CY; 1.

SMART; SM00043; CY; 1.

SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8WXU6;
                                             Q8K5A3
                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
                                                                                                                     75
                                                                                                                                                                              59;
                                                                                                                                    1 RQVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 59
                                                                                                                                                                                          Similarity
                                                                                                                     ROVTDHLEYHLNVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK 133
                                                                                                                                                                         100.0%; Score 334; DB 4; Length ilarity 100.0%; Pred. No. 2.2e-36; Conservative 0; Mismatches 0; Indels
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01-JUN-2003

(TrEMBLrel.

24,

Last

annotation update)

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RESULT 4
Q9DAP1
ID Q9DA
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DT 01-J
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Matches 28
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Matches 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-Sprague-Dawley;
Hamil K.G., Hall S.H.;
Hamil K.Ge, Hall S.H.;
Hamil K.G., Hall S.H.;
Hamil K.G., Hall S.H.;
Hamil K.G., Hall S.H.;
Submitted (Apr-2002) to the EMBL/GenBank/DDBJ dawners of the Company of the Co
                    Q9DAP1
Q9DAP1;
01-JUN-2001 (T:
01-JUN-2001 (T:
01-JUN-2003 (T:
1700006C19Rik |
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01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
    1700006C19RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
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32; Conserv
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                                                                                                                                                                                                                                                                                                                                LEYHLNVEMQWTTCQKPETINCVPQERELH------KQVNCFFSVFAVPWFEQYK 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KOMTNHMEPHITVEMORTICLKTEKNLCNVQEGELHKQIQCYFSVYVIPWLEVFKMLKK 133
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                                     (TrEMBLrel. 17,
L (TrEMBLrel. 17,
3 (TrEMBLrel. 24,
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                    protein.
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Primates;
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Pred. No. 4.6e-09;
8; Mismatches 12;
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Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; I Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              05DD92C47387B022 CRC64;
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red. No. 1.1e-17;
Mismatches 15;
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c member of the cystati
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                                                                                                                                                                                                                                                                                                                                                                                                                    Length 103;
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RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Matsuda H.A., Ashburner M., Beno H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchl P., Lewis S., Matsuo Y., Nanio H., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wasnio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sasaki M., Jaco K., Schoenbach C., Seya T., Shibata Y., Scorch K.-F.,
RA Mordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Hasegawa Y., Kowaji H., Kohtsuki S.,
RA Nordone P., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local S
Matches 24
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Q1.-UUN-2003 (TrEMBLrel. 24,
Q1.-UUN-2003 (TrEMBLrel. 24,
Q1-OCT-2003 (TrEMBLrel. 25,
RIKEN CDNA 1700006C19 gene.
                                                                Strausberg R.;
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ
EMBL; BC048681; AAH48681.1; -.
GO; GO:0004869; F:cysteine protease inhibitor
                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AK005665; BAB24175.1; ..
HSSP; P01038; 1CEW.
MGD; MGI:1916544; 1700006C19Rik.
GO; GO:0004869; P:cysteine protease inhibitor activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     Mus musculus (Mouse)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=21085660; PubMed=11217851;
                 InterPro; IPR000010; Cystatin.
InterPro; IPR003243; Cystatin_C/M.
Pfam; PF00031; cystatin; 1.
                                                                                                                                            TISSUE=Testicle;
                                                                                                                                                                                                NCBI_TaxID=10090;
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ProDom;
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PD001231; Cystatin_C/M; 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141 AA;
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                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
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Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32.2%;
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Last sequence up
Last annotation
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Pred. No. 2.5e
12; Mismatches
                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C20FA0D8B1AC378C CRC64;
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                                                                        activity; IEA
                                                                                                            databases
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dachi J., Fukuda S.,
ndo S., Yamanaka I.,
sukawa T., Saito R.,
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Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Ugdin T.B., Toshiyuki S., Caraninci P., Prange C.,

A Bosak S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Blosak S.A., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Hilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Touchman J.W., Green E.D., Dickson M.C.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S. T. Marra M. A.
                                                                        Query Match
Best Local S
Matches 20
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Q80Y72;
01-JUN-2003
                                                                                                                                                                    Pfam; PF00031; cystatin; 1.
ProDom; PD001231; Cystatin_C/M; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00043; CY; 1.
SEQUENCE 141 AA; 16825 MW;
                                                                                                                                                                                                                                                                                                                                                                                                       "Generation and initial analysis of more than 15,000 and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                          Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=22388257; PubMed=12477932;
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                                                                                                                                                                                                                      EMBL; BC048646; AAH48646.1; -.
GO; GO:0004869; F:cysteine protease
InterPro; IPR000010; Cystatin.
InterPro; IPR003243; Cystatin_C/M.
                                                                                                                                                                                                                                                                                                                                                TISSUE=Test:
                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jones S.J., Marra M.A.;
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76
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                                                                                            Similarity
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QLTTGVEYLVTVKIGRTKCKKNETKKASCPLOSSKLKKSLICKSLIYSVPWMNYYQLWN
                                    QVTDHLEYHLNVEMQWTTCQKPET--TNCVPQERELHKQVNCFFSVFAVPWFEQYKILN
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(TrEMBLrel. 24, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
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                                                                                                                                                16199 MW; 32633E99C4697DA0 CRC64;
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39.3%; Pred. No. 2.
                                                                        28.7%; Score 96; DB 11;
33.9%; Pred. No. 8.2e-05;
Live 14; Mismatches 23
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Mismatches 22; Indels
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                                                                                                                                                                                                                                                                inhibitor activity; IEA
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                                                                                                            Length 140,
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1 J.E.,
                                                                          Gaps
134
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01-MAR-2001
01-JUN-2003
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                   Q7Z4J8
Q7Z4J8;
                                                                                                          Kalnine N., Chen X., Rolfs A., Halleck A., Hines L., Eit Koundinya M., Raphael J., Moreira D., Kelley T., LaBaer Phelan M., Farmer A.; Submitted (AUG-2003) Co. the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                       01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=21010502; PubMed=11144350; Taupin P. J., Ray J., Fischer W.H., Gage F.H.; "FGF-2-Responsive neural stem_cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9EPX9;
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                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                    Cystatin F (Leukocystatin).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO; GO:0004869; F:cysteine protease
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autocrine/paracrine cofactor.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cystatin C
                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
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                                                                             BT009825; AAP88827.1;
NCE 167 AA; 18857 M
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74 KQLVAGVNYFLDVEMGRTTCTKSQTNLTDCPFHDQPHLMRKALCSFQIYSVPWKGTHSLT 133
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19;
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84
140 AA;
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Conservative
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Rodentia;
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15517 MW;
                                                                                                                                                                                                                                                            Primates;
                  25.7%;
                                                                                                                                                                                                                                                                            Chordata;
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                                                                                                                                                     Rolfs A., Halleck A., Hi
l J., Moreira D., Kelley
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16,
24,
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Last annotation update)
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Last annotation update)
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Pred. No. 0.00
14; Mismatches
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                Score 86;
Pred. No. (
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                                                                             E339025A5BD60177
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  Mismatches
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                                     Length 167;
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RC MEDLINE-21085660; pubMed=11217851;

RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Kawai J., Shinagawa A., Shibata Y., Konno H., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Saito R.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Reischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Fleischmann W., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Washio T.,

RA Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Washio T.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Gariboldi M.,

RA Schriml L.M., Staubli F., Beltcher C., Fujita M., Gariboldi M.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Havashizaki Y., Storch
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Best Local S
Matches 18
                                                                                                                                                                                                Q8VII3
Q8VII3;
01-MAR-2002
01-MAR-2002
01-JUN-2003
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Q9CX46;
01-JUN-2001
01-JUN-2001
                    Cystatin SC.
8030411F24RIK.
8030411F24RIK.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Bukaryota; Metazoa; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL, AKO20193, BAB32024.1; -.
HSSP; P01034; 1G96.
      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
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Mammalia; Eutheria;
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8030411F24RIK.
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GO:0004869; F:cysteine protease inhibitor activity;
erPro; IPR000010; Cystatin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130 AA;
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(TrEMBLrel. 20,
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                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14947 MW;
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Last sequence update)
Last annotation updat
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Pred. No. 0.004;
9; Mismatches
                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Best Local S
Matches 18
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Best Local &
                                                                                                                                                                Matches
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CST10 OR DD72.
Mus musculus (Mouse).
Mus musculus (Mouse).
Thervota; Metazoa; Chordata; Ci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9JM84;
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                             Pfam; PF00031; Cystatin; 1. PRINTS; PR00295; STEFINA. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                           MSD; P01034; 1G96.
MGD; MGI:1930004; Cst10.
GO;0004869; F:cysteine protease
InterPro; IPR000010; Cystatin.
InterPro; IPR001713; StefinA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Salivary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2003 (TrEMBLrel DD72 protein (Similar
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InterPro; IPR000010; Cystatin.
Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
SEQUENCE 130 AA; 15076 MW; DD349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Molecular cloning and characterization of cystatin SC and cystatin TE-1, new members of the cystatin family.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF440735; AAL30841.1; ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57; TISSUB=Testis;
Li Y., Friel P.J., Griswold M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAR-2003) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9JM84
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                                                                                                                                                                                                                                                                                                       PROSITE; PS00287; CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ikegawa S.,
                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGI:1925859; 8030411F24Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AB036743; BAA95411.1;
BC048364; AAH48364.1;
58 N 58
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                                                                                                                                                                19;
                                                                                1 RQVTDHLBYHLNVEMQWTTCQKPET--TNCVPQER-ELHKQVNCFFSVFAVPWFEQYKIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
18; Conserv
                                                   QQVVAGKNYYLKIELGRTTCTKTESNLVDCPFNEQPDQQKRVICNFQINVAPMLNKMSMT
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) (TrEMBLrel. 19
) (TrEMBLrel. 20
in (Similar to
                                                                                                                                                                                                                                                                          148 AA;
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ilarity 36.7%;
Conservative
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                                                                                                                                                                                          24.4%;
                                                                                                                                                                                                                                                                          16451 MW;
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15, Last sequence update)
24, Last annotation update)
o cystatin 10) (Chondrocytes).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the EMBL/GenBank/DDBJ databases
                                                                                                                                                             12;
                                                                                                                                                             Score 81.5; Di
Pred. No. 0.00
12; Mismatches
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9; Mismatches
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                             637534CBFC5AA179 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor
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                                                                                                                                               J. 0073;
27;
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      XX MEDLINE=21085660; PubMed=11217851;
XX Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
XX Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
XX Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
XX Alawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
XX Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
XX Kadota K., Matsuda H.A., Ashburnar M., Batalov S., Casavant T.,
XX Kadota K., Matsuda H.A., Ashburnar M., Batalov S., Casavant T.,
XX Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
XX Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
XX Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
XX Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
XX Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
XX Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
XX Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
XX Blake J., Bolfelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
XX Brownstein M.J., Balt C., Fletcher C., Fujita M., Gariboldi M.,
XX Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
XX Brownstein M.J., Balt C., Fletcher C., Fujita M., Gariboldi M.,
XX Blake J., Balke J., Balt C., Fletcher C., Fujita M., Gariboldi M.,
XX Blake J., Balt C., Fletcher C., Fujita M., Jee N.H.,
XX Blake J., Balt C., Standa J., Mazzarelli J., Mombaerts P.,
XX Blake J., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
XX Blake J., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 17
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Q9QWL5;
01-MAY-2000
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Q8VIHB;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                              [2]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
TISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
Morita M., Arakawa H.,
"A novel cystatin-like
"Submitted (JUN-1998) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Molecular cloning and characterization of cystatin SC and c
TB-1, new members of the cystatin family.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF442205; AALJ5350.1; -.
EMBL; CO:0004869; F:cysteine protease inhibitor activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-2003
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Li Y., Friel P.J., Griswold M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00031; cystatin; 1.
; SM00043; CY; 1.
P., Sato
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 LNVEWQWTTCQKPETT--NCVPQERELHKQVNCFFSVFAVPWFEQYKIL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR000010; Cystatin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CYSTATIN F) (LEUKOCYSTATIN).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yoshiuchi N.; metastasis associated gene."; o the EMBL/GenBank/DDBJ databases.
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Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fhluda S.,
A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Salto R.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaldo I., Pesole G., Quackenbush J.,
A Schriml L.M., Stabli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Schriml L.M., Stabli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Brownstein M.J., Bult C., Mashima J., Mazzarelli J., Mombaerts P.,
A Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
A Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
A Winshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence up
01-JUN-2003 (TrEMBLrel. 24, Last annotation
1700006F03Rik protein (Cystatin TE-1).
                                                                              Li Y., Friel P.J., Griswold M.D.;
"Molecular cloning and characterization of cystatin SC TE-1, new members of the cystatin family.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases EMBL; AK005670; BAB24179.1;
EMBL; AF440737; AAL30843.1;
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EMBL; AB015224; BAA34940.1; -.
EMBL; AK004420; BAB23298.1; -.
HSSP; P01034; 1G96.
                         MGD; MGI:1916612; 1700006F03Rik.
GO; GO:0004869; F:cysteine prote
                                                                                                                                                                                                                                                                                                                                                           "Functional annotation of Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=C57BL/6J; TISSUE=Testis; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
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GO; GO:0004869; F:cysteine protease
InterPro; IPR000010; Cystatin.
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Wynshaw-Boris A., Yoshida
                                                                                                                                                                                                                                                                       STRAIN=C57;
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                                                                                                                                                                                                                                                                    TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18847 MW;
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da K., Hasegawa
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                     protease
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Pred. No. 0.013
13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                    full-length mouse cDNA collection.";
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gawa Y., Ka
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                         inhibitor activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor activity; IEA.
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RESULT 15
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Search completed: March 23, Job time: 33.5983 secs
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Best Local S
Matches 18
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Q8VII2;
Q1-MAR-2002 (TrEMBLrel. 20, Created)
Q1-MAR-2002 (TrEMBLrel. 20, Last sequence update)
Q1-JUN-2003 (TrEMBLrel. 24, Last annotation update)
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SMART; SM00043; CY; 1.
SEQUENCE 128 AA; 15036 MW; 40AFD00103E55ED6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-Sprague-Dawley; TISSUE-Testis;
Li Y. Friel P.J., Griswold M.D.;
Li Y., Friel P.J., Griswold M.D.;
Li Y., Friel P.J., Griswold M.D.;
"Molecular cloning and characterization of cystatin SC and cystatin TE-1, new members of the cystatin family,";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF440736; AAL30842.1; -
GO, GO:0004869; F:cystatin; T.
GO, GO:0004869; F:cystatin.
Pfam; PF00031; Cystatin; 1.
SMART; SM00043; CY; 1.
CECUTATE TO THE TEST NOT THE TEST OF T
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Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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                                                                                                                                        70 KYLVDLEMGRTLCGKYDEDIDNCPLQEGPGEKKVRCTYIVETRVWVTEFTILN 122
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                                                                                                                                                                                       8 EYHLNVEMQWTTCQK--PETINCVPQERELHXQVNCFFSVFAVPWFEQYKIIN 58
                                                                                                                                                                                                                                                                          h 21.3%;
Similarity 34.0%;
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      128 AA;
                                                                                                                                                                                                                                                                                                                                                                                      15152 MW;
                                   2004, 17:13:33
                                                                                                                                                                                                                                                                          Score 71; DB 11; Length 128; Pred. No. 0.16; 9; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      BC158982F5EDA535 CRC64;
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Minimum
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273
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Copyright (c) 1993 - 2004 Compugen Ltd.
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31.9	31.9	31.9	31.9	31.9	31.9	33.9	33.9	34.1	34.1	4	35.0	36.8	σ	9	39.4	39.4	48.7	48.7	100.0	100.0	100.0	100.0	100.0	100.0	Query Match L
145	145	145	145	145	145	148	148	132	49	46	148	142	142	143 (142	142	52	33	137					48	Length DB
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ABG75925	AAU76555	AAU76578	AAE04887	AAE04323	AAE04315	AAG79364	ABP60965	AAU77836	AAU79863	AAU79860	AAU09877	ADD46704	ADD46708	ADA14374	AAE04433	AAE02404	AAU79864	AAU79862	AAU79852	AAU79854	AAU79853	AAU79865	AAU79866	AAU79867	
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116	96	121	116	142	142	142	142	142	142	142	142	142	123	92	145	165	165	165	145
w	w	w	w	7	7	7	7	σ	σ	4	4	N	Ŋ	N	4	σ	σ	4	σ
AAY81212	AAY91651	AAY81156	AAY81210	ADD46710	ADD46706	ADD37980	ADC74335	ADA41112	ADA57231	AAE04434	AAE02405	AAW78258	AAW78260	AAW78259	AAU08667	ABG75918	AAU76556	AAE04324	ABG75917
Aay81212	Aay91651	Aay81156	Aay81210	Add46710	Add46706	Add37980	Adc74335	Ada41112	Ada57231	Aae04434	Aae02405	Aaw78258	Aaw78260	Aaw78259	Aau08667	Abg75918	Aau76556	Aae04324	Abg75917
Egg white	Human sec		Egg white	Human Pro	Human Pro	Human sec	Human sec	Human sec	Human sec	Human cys	Human cys	Fragment	Fragment	Fragment	Human NOV	Human	Human	Human Zcy	Human cys

ALIGNMENTS

RESULT 1 AAU79867 ID AAU7 XX AAU7 XX AAU7 XX AAU7 XX AU7 XX AU7 XX AU7 XX Sper XX Cyst KW Sper XX WO20 PN WO20 XX The CC Spoll CC Subu Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved spers sperm motility; fertilisation; antigenic peptide. 01-SEP-2000; 2000US-0230230P. 29-AUG-2001; 2001WO-US026868. WO200220567-A2 Homo sapiens. Human cystatin-8 (Zcys8) antigenic fragment #15. 15-JUL-2002 AAU79867; AAU79867 standard; peptide; 48 Holloway JL, Gao Z, 14-MAR-2002. (ZYMO) ZYMOGENETICS INC. (first entry) Bishop PD; \$

Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.

WPI; 2002-383044/41.

Claim 2; Page 99; 100pp; English.

The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large

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RESULT 2
AAU79866
ID 79866
ID The invention describes an isolated mammalian cystatin-8 (Zcys8)

CD polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm contility and fertilisation; and as antigenic peptides to generate antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in cenhancing fertilisation during assisted reproduction in humans and in C enhancing fertilisation during assisted reproduction in humans and in C enhancing fertilisation during assisted reproduction in humans and in C enhancing fertilisation during assisted reproduction in bundans and in the control of crys8. The antibodies are useful to acreen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8 protein and DNA sequences that encode Zcys8 genes.

The polymucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 Query Match Best Local S Matches 48 quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 colligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer. Sequence 48 AA; Claim Holloway JL, 01-SEP-2000; 2000US-0230230P 14-MAR-2002. Homo sapiens Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sper Human cystatin-8 (Zcys8) antigenic fragment #14 AAU79866; AAU79866 standard; peptide; 29-AUG-2001; 2001WO-US026868 sperm 15-JUL-2002 (OMYZ) equence represents an antigenic peptide of human cystatin-8 (Zcys8) 2002-383044/41. motility; fertilisation; antigenic peptide. 2; Page 99; 100pp; English 48; ,_ 1 NVEMQWTTCQKPETTNCVPQERELHKQVNCFFSVFAVPWFEQYKILNK ZYMOGENETICS Similarity NVEMONTTCOKPETTNCVPOERELHKOVNCFFSVFAVPWFEOYKILNK 100.0%; ilarity 100.0%; Conservative 0 (first entry Gao Z, INC Bishop 59 0 g Score 273; DB 5; Pred. No. 4.7e-29; Mismatches 0; cryopréserved sperm; Length Indels 48 48 0 Gaps 0

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Best Local &
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                                                                                                            Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                                                                                                                                                                                                     AAU79865;
                                                                                                                                                                                                                                                                                                       AAU79865 standard; peptide; 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 59
14-MAR-2002
                                    WO200220567-A2
                                                                        Homo sapiens
                                                                                                                                                                                         Human cystatin-8 (Zcys8) antigenic fragment #13
                                                                                                                                                                                                                               15-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
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Pred. No. 6e-29;
Mismatches
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RESULT 3
AAUT98655
ID AAUT
XX AAUT
AX AAUT
AX AAUT
AX Cyst
KW Spex
XX WO2C
XX O1-4
PT 100
CC ASS
CC The
CC DTO
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CC SThe
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CC CON The invention describes an isolated mammalian cystatin-8 (2cys8)

CC polypeptide (I) (I) is useful for: inhibiting cancer procesulant

CC protein in an individual and thus inhibiting the thrombotic events

CC associated with cancer; promoting spermatogenesis, modulating seminal

CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm

CC motility and fertilisation; and as antigenic peptides to generate

CC antibodies. Zoys8 is useful as research reagent for characterising sites

CC of interaction between Zoys8 and its receptor. Zoys8 is useful in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enhancing fertilisation during assisted reproduction in humans and in

CC entitles. Anti-(I) antibodies are useful to screen biological samples like

CC polymucleotide protein and DNA sequences that encode Zoys8 genes.

CC The polymucleotide encoding (I) is useful to detect and to localise the

CC polymucleotide probes are useful for in vivo diagnosis. The

CC chromosomes contain a mutation in the Zoys8 gene like aneuploidy, gene Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer. Claim 2; Page 98; 100pp; English.

WPI; 2002-383044/41.

Holloway JL,

Gao Z,

B

01-SEP-2000; 2000US-0230230P 29-AUG-2001; 2001WO-US026868

(ZYMO) ZYMOGENETICS

NO Bishop

useful

Vivo

copy number changes, insertions,

genetic

alterations that inactivate

deletions,

restriction site changes and

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                                                                                                                 The invention describes an isolated mammalian cystatin-8 (Zcys8)

CC polypeptide (I). (I) is useful for: inhibiting cancer procoagulant

CC protein in an individual and thus inhibiting the thrombotic events

CC associated with cancer; promoting spermatogenesis, modulating seminal

CC fluid viscosity, enhancing viability of cryopreserved sperm, sperm

CC motility and fertilisation; and as antigenic peptides to generate

CC antibodies. Zcys8 is useful as research reagent for characterising sites

CC of interaction between Zcys8 and its receptor. Zcys8 is useful in

CC enhancing fertilisation during assisted reproduction in humans and in

CC enimals. Anti-(I) antibodies are useful to screen biological samples like

CC presence of Zcys8. The antibodies are also useful to isolate large

CC quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes.

CC oligonucleotide encoding (I) is useful to detect and to localise the

CC expression of a Zcys8 gene in a biological sample and Zcys8 genes.

CC oligonucleotide probes are useful for in vivo diagnosis. The

CC oplynucleotide encoding (I) is useful to detect and zcys8 gene

CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene

CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene

CC chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene

CC rearrangements and genetic alterations that inactivate the Zcys8 gene.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-SEP-2000; 2000US-0230230P
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spermatogenesis; seminal fluid viscosity; cryopreserved sper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 80 AA;
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Pred. No. 8.5e-29;
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Sequence 115 AA;

Query Match Best Local Similarity

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                                                                                                                           animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antibodies. Zcys8 is useful as research reagent for characterising sites of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
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                                                                        This sequence represents an antigenic fragment of human cystatin-8 (ZCys8)
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an individual and thus inhibiting the thrombotic events
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This is the amino acid sequence of human cystatin-8 (Zcys8)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 2; Page 93-94; 100pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                      Sequence 33
                                                                                                                                                                                                   copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for: inhibiting cancer procoagulant protein in an individual and thus inhibiting the thrombotic events
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Page 97; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-383044/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-SEP-2000; 2000US-0230230P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200220567-A2
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                                Local
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Similarity
23; Conserv
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                                                                                                                                         AA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide; 33
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                                Score 133; DB 5;
Pred. No. 1.9e-10;
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   Mismatches
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RESULT 8
AAU79864
ID 79864
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RESULT 9
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                    of interaction between ZCy88 and its receptor. ZCy88 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcy88. The antibodies are also useful to isolate large quantities of Zcy88 protein and DNA sequences that encode Zcy88 genes. The polymucleotide encoding (I) is useful to detect and to localise the expression of a Zcy88 gene in a biological sample and Zcy88 oligonucleotide encoding (I) is useful to rearrangements and sustain in the Zcy88 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcy88 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcy88)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention describes an isolated mammalian cystatin-8 (Zcys8) polypeptide (I). (I) is useful for; inhibiting cancer processulant protein in an individual and thus inhibiting the thrombotic events associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate antibodies. Zys8 is useful as research reagent for characterising sites of the seminal fluid viscosity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                                                                                                                                                                                                                                                                                                             Sequence 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Page 98; 100pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-SEP-2000; 2000US-0230230P
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                                                                                                                                                    NVEMOWITCQKPETINCVPQERE 23
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                                                                                                                                                                                                                                       48.7%; Score 133;
larity 100.0%; Pred. No. :
Conservative 0; Mismatch
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hes 0;
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AAE02404 ID AAE XX

AAE02404 standard; protein; 142

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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                         reproductive tissues and secretions. Cystatin T sequence is useful for modulating spermatogenesis and studying, diagnosing and treating reproductive disorders. The present sequence is murine cystatin-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to cystatin T (also known as zcys3) DNA and protein sequences. Cystatin T is testis specific and is homologous to cystatin-related epididymal specific gene (CRES) and type 2 cystatins. Cystatins inhibit cysteine proteinases and are found with male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cystatin T polypeptides are useful for modulating spermatogenesis studying, diagnosing and treating reproductive disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Murine; cystatin T; zcys3; cystatin-related epididymal specific CRES; inhibitor; cysteine proteinase; male reproductive tissue; spermatogenesis; therapy; reproductive disorder.
17-JUL-2000; 2000US-00617302.
                                                                                                                                                                                       04-SEP-2001
                                                                                                                                                                                                                AAE04433;
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                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 142 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holloway JL,
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                          12-JUN-2001
                                                                                                                  Mouse; cystatin T; zcys3; testis specific; spermatogenesis modulator; cystatin-related epididymal specific gene; CRES; gene therapy;
                                                                                                                                                           Mouse cystatin-related epididymal specific (CRES) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                             epididymal specific (CRES) protein
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28-SEP-1999;
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                                                                              Mus musculus
                                                                                                      sperm production; antiinfertility
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                                                                                                                                                                                                                                                                                                             87
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                                                                                                                                                                                                                                                                                                            DVQISRSNCKKPLNNTENCIPQKKPELEKKMSCSFLVGALPWNGEFNLLSK 137
                                                                                                                                                                                                                                                                                                                                    NVEMOWTTCOKP--ETTNCVPOER-ELHKOVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                              Conservative
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99US-0156382P.
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                                                                                                                                                                                                                                                                                                                                                                            39.4%;
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                                                                                                                                                                                                                                                                                                                                                                           Score 107.5; DB (
                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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RESULT 11
ADA14374
ADA14374
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PN WO2
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PF 14-
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PR 27
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PR 114
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Best Local S
Matches 20
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WPI; 2003-671663/
N-PSDB; ADA14477.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polynucleotides encoding testis-specific cystatin-like protein cystatin T, useful in gene therapy for modulating cystatin T activ particularly for modulating spermatogenesis, or enhancing sperm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   reproductive toxicity; reproductive capacity; mutation; expression abnormality; human male sterility associated gene; scot-t; succinyl CoA:3-oxo acid CoA transferase; human male sterility.
                                                                                              Nishimune Y,
                                                                                                                                                                                                                 14-FEB-2002; 2002JP-00036649.
27-DEC-2002; 2002JP-00381241.
                                                                                                                                                                                                                                                                                                      14-FEB-2003; 2003WO-JP001572.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mouse; spermatogenesis; gene cluster; mutagenicity;
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28-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DVQISRSNCKKPLNNTENCIPQKKPELEKKMSCSFLVGALPWNGEFNLLSK 137
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                                                                                                 Tanaka
                                                                                                                                                       SCI & TECHNOLOGY CORP
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99US-0156382P.
99US-00431480.
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Pred. No. 2.7e-06;
l6; Mismatches 12;
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XFFFXXXADDDDDDDDDDDDDDDDDDDDDDDDDDDDDDXXX
                                                                                         CC for testing the mutagenicity and reproductive toxicity of a test cindividual, by analysis of mutation and expression abnormalities of genes in the cluster; (8) polynucleotides which are mutations of the human male coint the cluster; (8) polynucleotides which are mutations of the human male cointly associated gene scot-t (succinyl CoA:3-oxo acid CoA transferase cointly associated gene scot-t (succinyl CoA:3-oxo acid CoA transferase cointly 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes a mouse spermatogenesis gene cluster containing 89 genes (see the cDNA sequences of ADA14442 to ADA14530). Also described: (1) a cDNA library containing cDNA encoding the gene cluster; (2) oligonucleotides of 10-99 bases containing partial sequences of genes of the cluster; (3) microarrays containing these oligonucleotides; (4) primer sets for PCR amplification of cDNA or genes of the cluster; (5) polypeptides encoded by the genes in the cluster; (6) antibodies to these polypeptides; (7) a method genes in the cluster; (6) antibodies to these polypeptides; (7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse spermatogenesis gene cluster and human male sterility associated genes, useful for diagnosis of human male sterility and testing substances for reproductive toxicity.
                                                                     the mouse spermatogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 155; 262pp; Japanese.
                                                                     gene cluster.
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Matches Query Match Best Local 87 1 NVEMOWTTCOKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILNK 48 Similarity DVQISRSNCKKPLNNTENCIPQKKPELEKKMSCSFLVGALPWNGEFNLLSK 137 Conservative 39.4%; 16; Score 107.5; DB 6; Pred. No. 2.7e-06; 6; Mismatches 12; 6 Length 143; Indels ω •• Gaps

2

Sequence 143 AA;

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RESULT 12
                                               ADD46708
                                         29-JAN-2004
                                                    ADD46708 standard; protein;
                                         (first entry)
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Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.

Rat Protein AAC36317, SEQ ID

NO 12393

Rattus norvegicus

WO2003016475-A2

27-FEB-2003.

14-AUG-2002; 2002WO-US025765.

14-AUG-2001; 2001US-0312147P

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                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC kit to perform the method, an array, a method for identifying an agent CC that increases or decreases the expression of the polynucleotide sequence Ct that is differentially expressed in neuronal tissue of a first animal CC subjected to pain, a method for identifying a compound which regulates CC the expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a CC method for identifying a compound or small molecule that regulates the activity of an animal of one or more of the polypeptides given in the cc activity in an animal of one or more of the polypeptides given in the composition, a method for identifying a compound useful in treating CC pain and a pharmaceutical composition comprising the one or more CC specification, a method for identifying a compound useful in treating CC polypeptides or their antibodies. The polynucleotide or the compound that condulates its activity is useful for preparing a medicament for treating CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction conjury (CCI) and spared nerve injury (SNI) in an animal (e.g. spene CC the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed consection, but was obtained in electronic form directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                               Rat; pain; neuronal tissue; gene therapy; chronic constriction injury; CCI; spared r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention discloses a composition comprising two or more isolated or human polynucleotides or a polynucleotide which represents a fragme derivative or allelic variation of the nucleic acid sequence. Also
  27-FEB-2003
                                         WO2003016475-A2
                                                                                                                                                                           Rat Protein AAC36317, SEQ ID NO 12389
                                                                                                                                                                                                                    29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New composition comprising preparing a medicament for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Woolf C, D'urso D,
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26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                               ADD46704 standard; protein; 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ftp.wipo.int/pub/published_pct_sequences.
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19; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                     NVEMOWTTCOKP--ETTNCVPOER-ELHKOVNCFFSVFAVPWFEQYKILNK 48
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                                                                                                                                                                                                                                                                                                                                                                                                  DVQISRSNCRKPLNNTENCIPQKNPKLEKKLSCSFLVGALPWNGEFDLLSK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                                                                                                                                                (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36.8%; Score 100.5; DB 7; 37.3%; Pred. No. 2.3e-05; tive 16; Mismatches 13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 two or more isolated polypeptides, useful for treating pain in an animal.
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                                                                                                                 ; spinal segmental nerve injury;
nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 142;
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RESULT 14
AAU09877
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence kit to perform the method, an array, a method for identifying an agent claim increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal compound that regulates the expression of the polynucleotide sequence the expression of a polynucleotide sequence compound that regulates the activity of one or more of the polynucleotide, a method for identifying a compound which regulates the compound that regulates the activity of one or more of the specification, a method for identifying a compound that regulates the activity in an animal of one or more of the polynucleotides, a method for identifying a compound useful in treating compound a pharmaceutical composition comprising the one or more of the specification, a method for identifying a compound useful in treating complypeptides or their antibodies. The polynucleotide or the compound that compound that sequence presented is a rat protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed of the printed activity is abtained in electronic form directly from WIPO at the specification, which is a differentially expressed during pain. Note:
                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                  26-FEB-2002
                                                                                                                                                                                        AAU09877
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New composition comprising preparing a medicament for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Woolf C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                  Novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                               87
                                                                                                                                                                                                                                                                                                             1 NVEMOWTTCQKP--ETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                   19;
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BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAC36317.
                                                                                                                                                                                        standard; protein; 148
                                                                                                                                                                                                                                                                              DVQISRSNCRKPLNNTENCIPOKNPKLEKKLSCSPLVGALPWNGEPDLLSK 137
                                                                                                                                                                                                                                                                                                                                                                                                                       142 AA;
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                                                                                secreted protein #18.
                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                36.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Befort
                                                                                                                                                                                                                                                                                                                                                 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     two or more isolated polypeptides, useful for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ~
                                                                                                                                                                                                                                                                                                                                               Score 100.5; DB Pred. No. 2.3e-056; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Costigan M;
                                                                                                                                                                                                                                                                                                                                                                                  DB 7;
                                                                                                                                                                                                                                                                                                                                                   13;
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Secreted protein; cytostatic; immunosuppressive; vulnerary; vaccine; antiinflammatory; neuroprotective; nephrotropic; cardiovascular; humcancer; autoimmune disease; wound healing disorder; infection; haematopoietic disorder; inflammatory disorder; infertility;

human;

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RESULT 15
AAU79860
ID AAU79
XX AAU79
XX AAU79
XX 15-JU
XX Human
XX Cysta
KW Spextm
KW Spextm
XX Homo
XX Homo
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Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  psychiatric diseases, cardiovascular diseases, respiratory diseases, renal diseases, or gastrointestinal diseases. These may also be used to treat diseases, abnormalities and disorders caused by abnormal expression, production, function and/or metabolism of the genes, as vaccines for inducing immunological response in a mammal, and in screening methods for detecting the effect of added compounds on the production of mRNA and polypeptide in cells. The polypeptides can be used as immunogens to produce antibodies immunospecific for the polypeptides, and to identify membrane-bound or soluble receptors. The polymucleotides may be used as diagnostic reagents, in chromosome localisation studies, and in tissue expression studies. The present sequence represents the amino acid sequence of novel human secreted protein #18
                                                                 Cystatin-8; Zcys8; cancer; procoagulant protein; thrombosis; spermatogenesis; seminal fluid viscosity; cryopreserved sperm; sperm motility; fertilisation; antigenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated novel secreted polypeptide (I) and polypucleotide (II). (I) and (II) are useful for treating cancer, autolmmune diseases, wound healing disorder, infections, haematopoietic disorders, inflammatory disorders, infertility, neurological and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New secreted proteins or polypeptides, useful for treating e.g. cancer, autoimmune diseases, wound healing disorder, infections, hematopoietic disorders, inflammatory disorders, infertility, cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SMIK)
                                                                                                                                                                                                              AAU79860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-APR-2000; 2000US-0196603P.
24-APR-2000; 2000US-0199417P.
                                   Homo sapiens.
                                                                                                                                       Human cystatin-8 (Zcys8) antigenic fragment #8.
                                                                                                                                                                            15-JUL-2002
                                                                                                                                                                                                                                            AAU79860 standard; peptide; 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 79-80; 92pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Agarwal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-061975/08.
DB; AAS17589.
                                                                                                                                                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                  1 NVEMOWTTCOK--PETTNCVPOER-ELHKOVNCFFSVFAVPWFEQYKILNK 48
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                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                Murdoch
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                    35.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                Score 95.5; DB 5;
Pred. No. 0.00011;
.1; Mismatches 18
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                                                                                                                                                                                                                                                                                                                                                                                                    18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 148;
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The invention des polypeptide (I). protein in an ind
                                      quantities of Zcys8 protein and DNA sequences that encode Zcys8 genes. The polynucleotide encoding (I) is useful to detect and to localise the expression of a Zcys8 gene in a biological sample and Zcys8 oligonucleotide probes are useful for in vivo diagnosis. The polynucleotide encoding (I) is useful in determining whether a subject's chromosomes contain a mutation in the Zcys8 gene like aneuploidy, gene copy number changes, insertions, deletions, restriction site changes and rearrangements and genetic alterations that inactivate the Zcys8 gene. This sequence represents an antigenic peptide of human cystatin-8 (Zcys8)
                                                                                                                                                                                                                                                of interaction between Zcys8 and its receptor. Zcys8 is useful in enhancing fertilisation during assisted reproduction in humans and in animals. Anti-(I) antibodies are useful to screen biological samples like blood, urine, saliva, tissue biopsy and autopsy material in vitro for the presence of Zcys8. The antibodies are also useful to isolate large
Sequence 46 AA;
                                                                                                                                                                                                                                                                                                                                                                                     associated with cancer; promoting spermatogenesis, modulating seminal fluid viscosity, enhancing viability of cryopreserved sperm, sperm motility and fertilisation; and as antigenic peptides to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel isolated mammalian cystatin-8 polypeptide useful for promoting spermatogenesis, and inhibiting cancer procoagulant protein which leads to inhibition of thrombotic events associated with cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-AUG-2001; 2001WO-US026868.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                  antibodies. Zcys8 is useful as research reagent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2; Page 97; 100pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          describes an isolated mammalian cystatin-8 (Zcys8)

I). (I) is useful for: inhibiting cancer procoagulant individual and thus inhibiting the thrombotic events
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뭉 S Query Match Best Local Matches 31 l Similarity 16; Conserv NVEMOWTTCQKPETTN 16 NVEMONTTCOKPETTN Conservative 34.1%; but 100.0%; Pr Score 93; Pred. No. Mismatches DB 5; L Indels 0,

Length 46

Gaps

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Search completed: March Job time: 38.3598 secs

23, 2004, 17:10:28

WO200220567-A2

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Result
No.
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Maximum DB
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Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - protein search, using sw
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
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Title:

ALIGNMENTS

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Sequence 3, Application US/09431480

Patent No. 6235708

GENERAL INFORMATION:

APPLICANT: Holloway, James L.

APPLICANT: Feldhaus, Andrew

ITILE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN T

FILE REFERENCE: 98-72

CURRENT APPLICATION NUMBER: US/09/431,480

CURRENT FILING DATE: 1999-11-01

EARLIER APPLICATION NUMBER: 60/109,217

EARLIER APPLICATION NUMBER: 60/156,382

EARLIER APPLICATION NUMBER: 60/156,382

EARLIER FILING DATE: 1999-09-28

NUMBER OF SEQ ID NOS: 22

SOPTWARE FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LENGTH: 142
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-431-480-3
                     CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR FILING DATE: 1998-11-20
PRIOR FILING DATE: 1998-11-20
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/09617302
Patent No. 6245529
GENERAL INFORMATION:
                                                                                                                                                                                                                              APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72 C1
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SEQ ID NOS:
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Pred. No. 1.8e-07;
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US-09-617-302-4
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                                                                       SOFTWARE:
SEQ ID NO 4
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Best Local 9
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SEQ ID NO 3
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Patent No. 6235708
GENERAL INFORMATION:
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                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/617,302
CURRENT FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 09/431,480
PRIOR FILING DATE: 1999-11-01
PRIOR APPLICATION NUMBER: 60/109,217
PRIOR APPLICATION NUMBER: 60/156,382
PRIOR APPLICATION NUMBER: 60/156,382
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APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72
                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                        APPLICANT: Holloway, James L.
APPLICANT: Feldhaus, Andrew
TITLE OF INVENTION: TESTIS SPECIFIC CYSTATIN-LIKE PROTEIN CYSTATIN
FILE REFERENCE: 98-72 C1
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ORGANISM: Mus musculus
                ORGANISM: Homo sapiens
                                    TYPE: PRT
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                                                      LENGTH: 142
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                                                                                             FastSEQ for Windows Version 3.0
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Pred. No. 1.8e-07;
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; ORGANISM: Homo sapiens
US-09-489-847-334
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SEQ ID NO 334
LENGTH: 96
                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 6476195
GENERAL INFORMATION:
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Best Local Similarity 40.0%;
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SEQ ID NO 187
                                                                                           EARLIER
EARLIER
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EARLIER FILING DATE: 1998-08-12
EARLIER APPLICATION NUMBER: 60/095,454
EARLIER FILING DATE: 1998-08-06
EARLIER APPLICATION NUMBER: 60/095,455
                  EARLIER APPLICATION NUMBER: 60/095,455
EARLIER FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 376
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                              CURRENT FILING DATE: 2000-01-2
                                                                                                                                                                                                                                                                                                            FILE REFERENCE: PZ031P1
CURRENT APPLICATION NUMBER: US/09/489,847
                                                                                                                                                                                                                                                                                                                                               APPLICANT: Rosen et al TITLE OF INVENTION: 98 Human Secreted Proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EARLIER FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 376
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CURRENT APPLICATION NUMBER: US/09/489,847
                                                                                                                                    EARLIER
                                                                                                                                                                          EARLIER
                                                                                                                                                                                            EARLIER
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                                                                                                                                                        EARLIER
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                                                                                                                                                                                                               EARLIER FILING DATE: 1998-07-30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: 98 Human Secreted Proteins
                                                                                                                                                                                                                                 PARLIER APPLICATION NUMBER: 60/094,657
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                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-08-06
                                                                                                                                                                                        APPLICATION NUMBER: 60/095,486
                                                                                                                                                      APPLICATION NUMBER: 60/096,319
                                                                                                                                                                        FILING DATE: 1998-08-05
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Pred. No. 0.00022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 80.5; DB 4;
Pred. No. 0.00069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 96;
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                                                                                                                                                                                                                                                                                                           RESULT 8
US-09-775-932-16
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FILE REFERENCE: 58069
CURRENT APPLICATION NUMBER: US/09/775,932
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin Ver. 2.0
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                                                                                                                                                                                                                        GENERAL INFORMATION: APPLICANT: Univers:
                                                                                                                                                                                                                                                             Sequence 16, Application US/09775932
Patent No. 6534477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EARLIER FILING DATE: 1998-08-06
EARLIER APPLICATION NUMBER: 60/095,455
EARLIER FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 376
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/489,847
CURRENT FILING DATE: 2000-01-24
EARLIER APPLICATION NUMBER: PCT/US99/17130
EARLIER FILING DATE: 1999-07-29
EARLIER APPLICATION NUMBER: 60/094,657
EARLIER FILING DATE: 1998-07-30
EARLIER FILING DATE: 1998-07-30
EARLIER APPLICATION NUMBER: 60/095,486
EARLIER FILING DATE: 1998-08-05
EARLIER FILING DATE: 1998-08-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURE:
NAME/KEY: SITE
LOCATION: (148)
                                                                                                                                                                                                  APPLICANT: University of British Columbia
TITLE OF INVENTION: Production and use of Modified Cystatins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER FILING DATE: 1998-08-12
EARLIER APPLICATION NUMBER: 60/095,454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: PZ031P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: 98 Human Secreted Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EARLIER APPLICATION NUMBER: 60/096,319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Rosen et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Xaa equals stop translation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match 29.5%;
Local Similarity 40.0%;
                                                                                                                                                                                                                                                                                                                                                                                                    115 TRCGKFEDDIDNCHFOESTELNNTFTCFFTISTRPWMTQFSLLNK 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96 TRCGKFEDDIDNCHFQESTELNNTFTCFFTISTRPWMTQFSLLNK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                             7 TTCQK--PETTNCVPQB-RELHKQVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 TTCQK--PETTNCVPQE-RELHKQVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Mismatches
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; SEQ ID NO 16
; LENGTH: 116
; TYPE: PRT
; ORGANISM: Gallus sp.
US-09-775-932-16
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Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                    APPLICATE
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0.
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/08791522 Patent No. 5935817
                                                              Matches
                                                                                            Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                    TYPE: amino acio
STRANDEDNESS: 8:
TOPOLOGY: linea
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 31..
CITY: Palo Alto
                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/7:
FILING DATE: Filed Herewith
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Bandman, Olga
APPLICANT: Goli, Surya K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
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                                                                                                                               LIBRARY: Gen.
                                                                              Local Similarity
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 87
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                                                              18;
                            2 VEMOWITCOKP--ETTNC-VPOERELHKOVNCFFSVFAVPWFEOYKIL 46
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                                                                                                                                                                                                                          amino acid
VEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL 134
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                                                                                                                                                                                                                                         139 amino acids
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                                                              Conservative
                                                                                                                                                                                          linear
                                                                                                                                                                                                         single
                                                                             29.1%;
37.5%;
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37.5%;
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Pred. No. 0.0012;
8; Mismatches 1
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                                                                           Score 79.5; DB 2;
Pred. No. 0.0015;
                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
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                                                               19;
                                                                                             Length 139;
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RESULT 10 US-09-314-777-4

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RESULT 11
US-08-849-303-15
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                                                                                                                                                                                                                                       Sequence 15, Applia Patent No. 6680424
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                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Atkinso
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 51.
STREET: CA CITY: CA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
ATTORNBY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF
                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: line IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Goli, Surya K.
TITLE OF INVENTION: NOVEL HUMAN CYSTATIN-LIKE
TITLE OF INVENTION: PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 415-855-0555
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                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                               Local
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CLONE: 118195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: sir
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SOFTWARE: FastSE(
                                   COUNTRY: U
                                                                  STATE:
                                                                                   CITY:
                                                                                                                                                            PLICANT: Urwin, Peter E.
TLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
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                                                                                                              ADDRESSEE:
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Similarity 37.5%;
                                                                               Hackensack
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                                                                 New Jersey
                                                                                                                                                                                                                                                       Application US/08849303
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                                                                                              411 Hackensack Avenue, 4th Floor
                                                  USA
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                                                                                                                                                                                         Atkinson, Howard J. McPherson, Michael J.
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                                                                                                              Klauber & Jackson
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                                                                                                                                              COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA RE-lease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/849,303
FILING DATE: 21-MAY-1997
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1321-1-003
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 19, Appli
Patent No. 6680424
                                  INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 127 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Atkinson, Howard J.
APPLICANT: McPherson, Michael J.
APPLICANT: Urwin, Peter E.
TITLE OF INVENTION: MODIFIED PROTEINASE INHIBITORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS LENGTH: 139 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 201-487-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0 FILING DATE: 21-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 411 Hack
CITY: Hackensack
STATE: New Jerse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE DOCKST NUMBER: 1321-1-003
                                                                                                  TELEPHONE: 201-343-1684
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87 VEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    07601
                    amino acid
                                                                                              133521
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08849303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411 Hackensack Avenue, 4th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               139 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
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                                                                                                                                      201-487-5800
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single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19;
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RESULT 13
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; APPLICANT: GRUBB, ANDERS;LUNDWALL, AKE;ABRAHAMSON, MAGNUS;
;DALBGE, HENRIK
; TITLE OF INVENTION: RECOMBINANT 3-DES-OH-CYSTATIN C PRODUCED
:BY EXPRESSION IN A PROCARYOTIC HOST CELL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
US-09-775-932-4
                                                                                                                                                     ; LENGTH: 121
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-775-932-4
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NUMBER OF SEQUENCES: 8
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: University of British Columbia
TITLE OF INVENTION: Production and use of Modified Cystatins
FILE REFERENCE: 58069
CURRENT APPLICATION NUMBER: US/09/775,932
CURRENT FILING DATE: 2001-02-02
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Best Local 9
                                                                                                                                                                                                                                  SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/09775932
Patent No. 6534477
                                                                             Matches
                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: CA99/00717
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 60/095,503
PRIOR FILING DATE: 1998-08-05
                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 3:
SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/07/929,290
FILING DATE: 13-AUG-1992
PRIOR APPLICATION UNATA:
APPLICATION NUMBER: 440,221
FILING DATE: 21-NOV-1989
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                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 297,198 FILING DATE: 20-MAY-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 146
   66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91 DVELGRTTCTKTQPNLDNCPFHDQPHLKRKAFCSFQIYAVPW-QQTMTLSK 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72 DVEMGRITCTKSQINLINCPFHDQPHLMRKALCSFQIYSVPW 113
                                     1 NVEMOWITCOK--PETTNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NVEMOWITCOK--PETTNC-VPQERELHKQVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NVEWOWTTCOKPET -- TNC-VPQERELHKQVNCFFSVFAVPW 39
                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         h 27.8%;
Similarity 37.3%;
19; Conservative
DVEVGRTICTKSOPNLDTCAFHEQPELOKKQLCSFEIYEVPWEDRMSLVN 115
                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.8%;
                                                                         27.7%; Score 75.5; DB 4; 34.0%; Pred. No. 0.0045; tive 10; Mismatches 20;
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                                                                                                                 Length 121;
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RESULT 15
US-08-744-138-5
Search completed: March 23, 2004, 17:15:31 Job time : 11.6444 secs
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                                                                                                                                             Matches
                                                                                                                                                            Query Match
Best Local Similarity
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INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                      HYPOTHETICAL: NO
ORIGINAL SOURCE:
INDIVIDUAL ISOLATE: Cystatin S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN ReLease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/744,138
FILING DATE:
CLASSIFICATION: 435
CLASSIFICATION: 435
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rosen, Craig A.
APPLICANT: Yu, Guo-Liang
TITLE OF INVENTION: Human Cystatin B
                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 301 309 8504
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
STREET: 94
                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
TOPOLOGY: li
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                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                             17;
                                                                                                     1 NVEMOWTTCOK -- PETTNCVPOER-ELHKOVNCFFSVFAVPWFEQYKILN 47
                                                                       DVEVGRTICTKSQPNLDTCAFHEQPELQKKQLCSFEIYEVPWEDRMSLVN 135
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                                                                                                                                                                                                                                                                                                                                                               141 amino acids
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                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                           linear
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                                                                                                                                                                                                                                                                                        protein
                                                                                                                                                            27.7%;
                                                                                                                                             10; Mismatches
                                                                                                                                                            Score 75.5; DB 3
Pred. No. 0.0055;
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq length: 0
seq length: 2000000000
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273
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l: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
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cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
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  1117
1117
137
148
148
148
148
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2 6/ptodata/1/pubpaa/US09B PUBCOMB. pep: *
2 6/ptodata/1/pubpaa/US09C PUBCOMB. pep: *
2 6/ptodata/1/pubpaa/US09 NEW PUB. pep: *
2 6/ptodata/1/pubpaa/US10A PUBCOMB. pep: *
2 6/ptodata/1/pubpaa/US10B PUBCOMB. pep: *
2 6/ptodata/1/pubpaa/US10C PUBCOMB. pep: *
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6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
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                                     US-09-941-314-17
US-09-941-314-15
US-09-941-314-3
US-09-941-314-3
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479.770 Million cell updates/sec
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                Sequence 17, Appl
Sequence 16, Appl
Sequence 15, Appl
Sequence 3, Appli
Sequence 4, Appli
Sequence 2, Appli
Sequence 12, Appl
Sequence 12, Appl
Sequence 14, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 2, Appli
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Sequence 2
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-10-063-599-1	-10-230-434-2	0-219-076-	0-227-883-2	73-2	0-218-849-	5	US-10-216-159A-222	0-063-567-1	0-227-693-1	US-10-063-598-144	0-230-414-2	-1	US-10-218-631-222	۲,	-10-054-683-	0-230-163-2	US-10-227-884-222	Ŀ	0-063-616-1	-10-063-547-1	-10-006-867-1	US-10-232-230-222	0-219-535-2	33	US-10-235-148-5	US-10-006-467-5	US-09-740-638-5	US-10-168-425-14	US-10-235-148-2
e 144,	e 222,	e 222,	e 222,	e 222,	e 222,	equence 144,	e 222,	e 144,	e 144,	e 144,	•	e 144,	e 222,	Sequence 222, App	e 31,	e 222,	e 222,	e 144,	e 144,	Sequence 144, App	e 144,	e 22	e 22	e 33	e 5	e 5,	quence 5,		Sequence 2, Appli

ALIGNMENTS

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GENERAL INFORMATION:

APPLICANT: ZymoGenetics, Inc.

TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to

TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein

FILE REFERENCE: 00-81PC

CURRENT APPLICATION NUMBER: US/09/941,314

CURRENT FILING DATE: 2001-08-29

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR APPLICATION NUMBER: 60/230,230

PRIOR FILING DATE: 2001-09-01

NUMBER OF SEQ ID NOS: 19

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 17

LENGTH: 48
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; Sequence 17, Application US/09941314
; Patent No. US20020142396A1
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Sequence 16, Application US/09941314
Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its
TITLE OF INVENTION: Inhibit Cancer Procoagulant
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Best Local
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-09-941-314-17
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Local Similarity 100.0%; P
hes 48; Conservative 0;
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Pred. No. 3.6e-29;
; Mismatches 0;
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FILE REFERENCE: 00-81PC

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FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOPTWARE: FRAESEQ for Windows Version 4.0
SEQ ID NO 15
LENGTH: 80
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US-09-941-314-3
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US-09-941-314-15
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US-09-941-314-16
US-09-941-314-3
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16
LENGTH: 59
                                                                                                                                                                                                                                Sequence 3, Application US/09941314
Patent No. US20020143396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its
TITLE OF INVENTION: Inhibit Cancer Procoagulant
FILE REFERENCE: 00-81PC
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Matches
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Best Local Similarity 100.
Conservative
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                                                                                 SEQ ID NO 3
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                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
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TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
                                                                                                       NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
                 TYPE: PRT
ORGANISM: Homo sapiens
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                                                             LENGTH: 115
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les 48; Conservative
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100.0%; Pred. No. 4.5e-29;
tive 0; Mismatches 0;
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RESULT 5
US-09-941-314-4
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US-09-941-314-2
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APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its
TITLE OF INVENTION: Inhibit Cancer Procoagulant
FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 19
SOFTWARE: FABTSEQ for Windows Version 4.0
SEQ ID NO 4
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Patent No. US20020142396A1
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Best Local
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Best Local :
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Best Local :
                                                                                                                                                                                                                                                     TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein FILE REFERENCE: 00-81PC
CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
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TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                    LENGTH: 137
TYPE: PRT
                                                                             y Match 100.0%; Score 273; DB 9; Local Similarity 100.0%; Pred. No. 1.2e-28; hes 48: Conservative 0; Mismatches 0;
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  85
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                      1 NVEMOWTTCOKPETTNCVPOERELHKQVNCFFSVFAVPWFEQYKIINK 48
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NVEMQWTTCQXPETTNCVPQERELHXQVNCFFSVFAVPWFEQYXILNX 132
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100.0%; Pred. No. 9.6e-29;
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Pred. No. 9.8e-29;
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Protein
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RESULT 7 US-09-941-314-12

Sequence 12, Application US/09941314 Patent No. US20020142396A1

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APPLICANT: Agarwal, Pankaj
APPLICANT: Murdoch, Paul R.
APPLICANT: Rizvi, Safia K.
APPLICANT: Smith, Randall F.
APPLICANT: Xiang, Zhaoying
TITLE OF INVENTION: NOVEL COMPOUNDS
FILE REFERENCE: GP50022
CURRENT APPLICATION NUMBER: US/10/257,174
CURRENT FILING DATE: 2002-01/11797
PRIOR APPLICATION NUMBER: PCT/US01/11797
PRIOR APPLICATION NUMBER: PCT/US01/11797
PRIOR FILING DATE: 2001-04-11
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US-09-941-314-14
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US-10-257-174-42
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US-09-941-314-14
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CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 12
LENGTH: 33
TYPE: PRT
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Patent No. US20020142396A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 42, Application US/10257174 Publication No. US20040034194A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Mammalian Cystatin-8 and Its | TITLE OF INVENTION: Inhibit Cancer Procoagulant | FILE REFERENCE: 00-81PC | CURRENT APPLICATION NUMBER: US/09/941,314 | CURRENT FILING DATE: 2001-08-29 | PRIOR APPLICATION NUMBER: 60/230,230 | PRIOR FILING DATE: 2001-09-01 | NUMBER OF SEQ ID NOS: 19 | NUMBER OF SEQ ID NUMBER OF SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 52
APPLICATION NUMBER: 60/196,603
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NVEMONTTCOKPETTNCVPOERE 52
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100.0%; Pred. No.
1ve 0; Mismatches
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Pred. No. 2.4e-10;
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-257-174-42
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                                                                                                                                CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
NUMBER OF SEQ ID NOS: 19
SOPTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 13
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SEQ ID NO 10
LENGTH: 46
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Patent No. US20020142396A1
GENERAL INFORMATION:
APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
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PRIOR APPLICATION NUMBER: 60/199,417
PRIOR FILING DATE: 2000-04-24
NUMBER OF SEQ ID NOS: 48
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 42
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Query Match
Best Local Similarity
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CURRENT APPLICATION NUMBER: US/09/941,314
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: 60/230,230
PRIOR FILING DATE: 2001-09-01
                                                                                                                                                                                                                                                                            APPLICANT: ZymoGenetics, Inc.
TITLE OF INVENTION: Mammalian Cystatin-8 and Its Use to
TITLE OF INVENTION: Inhibit Cancer Procoagulant Protein
FILE REFERENCE: 00-81PC
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                                                                            LENGTH: 49
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
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Local Similarity 37.3%; Pred. No. 8.3e-05;
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34.1%;
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100.0%; Pred. No. 4.8e-05;
tive 0; Mismatches 0;
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Score 93;
Pred. No.
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                                                                                                                                          RESULT 14
US-09-740-638-2
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-873-135-2
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CURRENT APPLICATION NUMBER: US/09/873,135
CURRENT FILING DATE: 2001-06-01
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Presnell, Scott R.
APPLICANT: Gao, Zeren
TITLE OF INVENTION: Zcys6: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2
LENGTH: 132
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Sequence 2, Application US/09740638
Patent No. US20020006656A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: Scys5: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104
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Best Local Similarity 41.7%;
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CURRENT FILING DATE: 2001-08-02
NUMBER OF SEQ ID NOS: 4
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CURRENT ADDITION:
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TITLE OF INVENTION: Zcys9: A member of the
TITLE OF INVENTION: superfamily
                                                                                                                                                                                                                         91 NLOLROTVCRKFEDDIDNCPFQESLELNNTFSCFFTVETMPWKTYFELLNK 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81 LEMGLTICKKYDEDIDNCPLQEGSAEKKVYCTFVMDARPWFSQFNLLN 128
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Pred. No. 0.00016;
7; Mismatches 19
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-740-638-2
Search completed: March 23, 2004, 17:17:53 Job time : 26.908 secs
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US-10-006-467-2
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Publication No. US20020164740A1
GENERAL INFORMATION:
APPLICANT: Holloway, James L.
TITLE OF INVENTION: ZCYS5: A Member of the Cystatin
TITLE OF INVENTION: Superfamily
FILE REFERENCE: 99-104C1
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CURRENT FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/006,467
CURRENT FILING DATE: 2001-12-04
PRIOR APPLICATION NUMBER: 60/172,119
PRIOR FILING DATE: 1999-12-23
PRIOR APPLICATION NUMBER: 09/740,638
PRIOR APPLICATION NUMBER: 09/740,638
PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 13
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                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
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14; Conservative
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                                                                                                                    2 VEMOWITCOKPETTN--CVPOERELHKOVNCFFSVFAVPWFEOYKILN 47
                                                                                                                                                                                    Similarity
                                                                               VKIGWTKCKRNDTSNSSCPLOSKKLRKSLICESLIYTMPWINYFQLWN 131
                                                                                                                                                                   Conservative
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29.2%; Pred. No. 0.0011;
ative 15; Mismatches 1
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Copyright (c) 1993 - 2004 Compugen Ltd.
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                      cystatin precursor cystatin C precurs cystatin C precurs cystatin S precurs cystatin S precurs cystatin S precurs cystatin D precurs cystatin D precurs cystatin D precurs cystatin - bovine cystatin - bovine kininogen, LMW I I kininogen, LMW I I kininogen, LMW I pkininogen, HMW I pkininogen, HMW I pkininogen, LMW protatin - chum sa hypothetical prote conserved hypothetical prote conserved hypothetical prote endothelin recepto endothelin recepto
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A45361
Hoppe-Seyler's Z. Physiol. Chem. 364, 1487-1496, 1983
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45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30
53	53	53	53	53	53	54	54	54	54	54	54.5	55	55	55	55
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cytoplasmic dynein	genome polyprotein	lactotransferrin p	hypothetical prote	hypothetical prote	endothelin recepto	hypothetical prote	hypothetical prote	DNA-binding protei	DNA-binding protei	hypothetical prote	ubiquinol-cytochro	interferon alpha r	hypothetical prote	25K calcium-bindin	small T antigen -

ALIGNMENTS

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A; molecule type: protein A; Residues: 97-114 < LAB> R; Colella, R.; Bird, J.W.C. Gene 130, 175-181, 1993 A; Title: Isolation and characterization of the chicken cystatin-encoding A; Reference number: JN0789; MUID:93366172; PMID:8359684 A; Accession: JN0789; MUID:93366172; PMID:8359684 A; Molecula to the chicken cystatin-encoding A; Molecula to the chicken cystatin cyst
cystatin C - rat
C;Species: Rattus sp. (rat)
C;Species: Rattus sp. (rat)
C;Species: Rattus sp. (rat)
C;Date: 21-Nov-1993 #sequence_revision 03-Nov-1995 #text_change 16-Jul-1999
C;Accession: $10587
R;Esnard, F:, Esnard, A.; Faucher, D.; Capony, J.P.; Derancourt, J.; Brillard, M.; Gauth Biol. Chem. Hoppe-Seyler 371(Suppl.), 161-166, 1990
A;Title: Rat cystatin C: the complete amino acid sequence reveals a site for N-glycosyla A;Reference number: $10587; MUID:90380276; PMID:2400577
A;Accession: $10587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: Cystatin; cystatin homology
C;Superfamily: Cystatin; cystatin homology
C;Superfamily: cysteine proteinase inhibitor; egg white; phosphoprotein
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-139/Product: cystatin, long form #status experimental <CYLF>
F;30-139/Domain: cystatin homology <CYS
F;32-139/Product: cystatin homology <CYSF>
F;76-80/Region: inhibitory #status predicted
F;94-104,118-138/Disulfide bonds: #status experimental
F;94-104,118-138/Disulfide bonds: #status experimental
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S10587
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A;Title: Cystatin, a protein inhibitor of cysteine proteinases. Improved A;Reference number: A37514, MUID:83256421; PMID:6409085
A;Contents: annotation; characterization of protein
Contents: annotation; characterization of protein
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A;Title: The cysteine proteinase inhibitor chicken cystatin is a phosphoprotein. A;Reference number: S04008; MUID:89252033; PMID:2721673
A;Accession: S04008
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FEBS Lett. 170, 370-374, 1984
A;Title: The disulphide bridges of human cystatin C (gamma-trace)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of A;Reference number: S01461; MUID:84110059; PMID:6662498
A;Accession: S01461
A;Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Gene: Csn
A; Introns: 76/3; 114/3
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A;Note: authors failed to translate the codon for residue 115-Tyr
C;Comment: This protein binds tightly to and inhibits a variety of cysteine proteinases
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A;Title: Production, inhibitory activity, folding and conformational analysis of an N-te A;Reference number: S48159; MUID:95010016; PMID:7925354
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Biochem. J. 211, 129-138, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;103/Binding site: phosphate (Ser) (covalent)
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     C;Species: Homo sapiens (man)
C;Date: 25-Feb-1985 #sequence revision 08-Feb-1996 #text change C;Accession: $17667; $16500; $01272; $A29603; $19280; $A56\overline{608} R;Bobek, L.A.; Aguirre, A.; Levine, M.J.
Biochem. J. 278, 627-635, 1991
B;Title: Human salivary cystatin S. Cloning, sequence analysis, A;Fitle: number: $17667; MUID:91378918; PMID:1898352
A;Accession: $17667
A;Molecule type: mRNA
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cystatin C precursor - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 01-Dec-1993 #sequence revision 03-Aug-1995 #text_change 16-Jul-1999
C;Accession: $07085; $01337; $21109
R;Cole, T.; Dickson, P.W.; Esnard, F.; Averill, S.; Risbridger, G.P.; Gauth:
Eur. J. Biochem. 186, 35-42, 1989
A;Title: The cDNA structure and expression analysis of the genes for the cyal A;Reference number: $07085; MUID:90092122; PMID:2689174
A;Accession: $07085
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A;Molecule type: protein
A;Residues: 1-120 <ESN>
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A;Title: Two rat homologues of human cystatin C. A;Reference number: S01337; MUID:88313020; PMID:3044831
                                                                                                                                                                                                                                                                                                                     FEBS Lett. 300, 131-135, 1992
A;Title: Production of the cysteine proteinase inhibitor
A;Reference number: S21109; MUID:92225121; PMID:1563513
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:X16957; NID:g56041; PIDN:CAA34831.1; PID:g736290 R;Esnard, A.; Esnard, F.; Faucher, D.; Gauthier, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-127 < COL>
                                                                                                                                                                                                                                                        A; Molecule type: protein
A; Residues: 8, 'XX', 11-20 <ES2>
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                                                                                                                                                                                         Superfamily: cystatin; cystatin homology;
Keywords: cysteine proteinase inhibitor;
16-127/Domain: cystatin homology <CYS>
                                                                                                                                                                                                                                                                                                   Accession: S21109
                                                                                                                                                                                                                                                                                                                                                                     ;Esnard, A.; Esnard, F.; Guillou, F.; Gauthier, 
SBS Lett. 300, 131-135, 1992
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Best Local
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17; Conserv
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                                      NVEMOWITCOKPET -- TNC-VPQERELHKQVNCFFSVFAVPW 39
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DVEMGRITCIKSQINLINCPFHDQPHLMRKALCSFQIYSVPW 113
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Pred. No. 0.00
B; Mismatches
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Alternate names: cystatin SA-III; salivary acidic protein-1

hybridization

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Bitu

16-Jul-1999

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A; Map position: 20p11.2-20p11.2
C; Superfamily: cystatin; cystatin homology
C; Keywords: cystetine proteinase inhibitor; phosphoprotein; saliva
F; 1-20/Domain: signal sequence #status predicted <SIG>
F; 21-141/Product: cystatin S #status predicted <MAT>
F; 30-141/Domain: cystatin homology <CYS>
F; 76-80/Region: inhibitory #status predicted
F; 94-104,118-138/Disulfide bonds: #status predicted
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A;Molecule type: protein
A;Residues: 21-55 <RAM>
A;Rolecule type: protein
A;Residues: 21-55 <RAM>
R;Johnsson, M.; Richardson, C.F.; Bergey, B.J.; Levine, M.J.; Nancollas, G.H.
Arch. Oral Biol. 36, 631-636, 1991
A;Title: The effects of human salivary cystatins and statherin on hydroxyapatite
A;Reference number: A56608; MUID:92074898; PMID:1741693
A;Accession: A56608
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A;Molecule type: protein
A;Molecule type: protein
A;Residues: 21-51 cHAW>
A;Residues: 21-51 cHAW>
R;Ramasubbu, N.; Reddy, M.S.; Bergey, E.J.; Haraszthy, G.G.; Soni, S.D.; Levine, M.J.
Biochem. J. 280, 341-352, 1991
A;Title: Large-scale purification and characterization of the major phosphoproteins and A;Reference number: S19279; MUID:92082469; PMID:1747107
A;Accession: S19280
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A;Residues: 29-134, D',136-141 <ISB>
R;Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.
R;Isemura, S.; Saitoh, E.; Ito, S.; Isemura, M.; Sanada, K.
J. Biochem. 96, 1311-1314, 1984
A;Title: Cystatin S: a cysteine proteinase inhibitor of human A;Contents: annotation; inhibitor specificity
A;Contents: annotation; inhibitor specificity
R;Hawke, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.
R;Hawke, D.H.; Yuan, P.M.; Wilson, K.J.; Hunkapiller, M.W.
Biochem. Biophys. Res. Commun. 145, 1248-1253, 1987
A;Fitle: Identification of a long form of cystatin from human a, Reference number: A29603; MUID:87270697; PMID:3496880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Note: sequence extracted from NCBI backbone (NCBIP:67866)
A;Note: authors desigate form without phosphate as cystatin S and form containing one ph C;Comment: This protein strongly inhibits papain and ficin, partially inhibits stem brown
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A;Title: Sallvary cystatin SA-III, a potential precursor of the acquired A;Reference number: S16500; MUID:91378515; PMID:1898055
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A;Title: Isolation and amino acid sequence of SP-1, an acidic protein of human whole sal
A;Reference number: A91985; MUID:85054716; PMID:6501254
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A;Residues: 21-134,'D',136-141 <IHU>
R;Isemura, S.; Saitoh, E.; Sanada, K.
cystatin SA
C;Species: H
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                               precursor -
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                                                                                                                                                                                                                               DVEVGRTICTKSQPNLDTCAFHEQPELQKKQLCSFEIYEVPWEDRMSLVN 135
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                                                                                                                                                                                                                                                                                                                                                                     27.7%; Score 75.5; DB 1; ilarity 34.0%; Pred. No. 0.027; Conservative 10; Mismatches 20;
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No. 0.027;
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NVEMQWTTCQKPET--TNC-VPQERELHKQVNCFFSVFAVPW 39

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R;Solem, M.; Rawson, C.; Lindburg, K.; Barnes, D.
Biochem. Biophys. Res. Commun. 172, 945-951, 1990
A;Title: Transforming growth factor beta regulates cystatin
A;Reference number: A36163; MUID:91054522; PMID:2241983
A;Accession: A36163
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B;Title: Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily A;Reference number: S02489; MUID:89076505; PMID:3202964
A;Accession: S02490
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                                                                                                                                                            A;Cross-references: EMBL:M59470; NID:g192911; PIDN:AAA63298.1; PID:g192912 (SUpperfamily: cystatin; cystatin homology F;29-140/Domain: cystatin homology <CYS» F;29-140/Domain: cystatin homology <CYS» (Superfamily: cystatin homology (CYS) (Superfamily: cystatin homology) (Super
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C; Superfamily: cystatin; cystatin homology
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A; Residues: 25-134, 'D', 136-141 <IS2>
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A; Accession: B27015
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R;Isemura, S.; Saitoh, E.;
J. Biochem. 102, 693-704, 1
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A; Residues: 1-140 < SO
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A;Residues: 1-141 <SAI>
                                       Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Species: Mus musculus (house mouse)
;Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 16-Jul-1999
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t; Pred. No. 0.036;
11; Mismatches
9;
Score 73.5; DB Pred. No. 0.047; Mismatches
                                                                              DB 2;
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    14;
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A;Cross-references: EMBL:X52255; NID:g30257; PIDN:CAA36497.1; PID:g296643
R;Abrahamson, M.; Grubb, A.; Olafsson, I.; Lundwall, A.
FEBS Lett. 216, 229-233, 1987
A;Title: Molecular cloning and sequence analysis of cDNA coding for the p1
A;Reference number: S00004
A;Accession: S00004
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-146 <ABS2-
A;Cross-references: EMBL:X05607; NID:g30371; PIDN:CAA29096.1; PID:g755738
R;Levy, E.; Lopez-Otin, C.; Ghiso, J.; Geltner, D.; Frangione, B.
J. Exp. Med. 169, 1771-1778, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Abrahamson, M.; Olafsson, I.; Palsdottir, A.; Ulvsbaeck, M.;
Blochem. J. 268, 287-294, 1990
A;Title: Structure and expression of the human cystatin C gene
A;Reference number: S10216; MUID:90303202; PMID:2363674
A;Accession: S10216
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A;Cross references: GDB:136380; OMIM:123858
A;Map position: 20p11.21-20p11.21
A;Introns: 77/3; 115/3
A;Introns: 77/3; 115/3
C;Superfamily: cystatin; cystatin homology C;Keywords: cystatine proteinase inhibitor; (F;1-20/Domain: signal sequence #status predi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Structure and expression of the gene encoding cystatin D, a novel human A;Reference number: S18212; MUID:92041895; PMID:1939105
A;Accession: S18212
A;Status: preliminary
A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-45,'C',47-142 <FR2>
A;Cross-references: EMBL:X59964; NID:g30263; PIDN:CAA42590.1; PID:g30264
C;Genetics:
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A;Residues: 1-142 <FRE>
A;Residues: 1-142 <FRE>
A;Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711
A;Cross-references: GB:X70377; NID:g398710; PIDN:CAA49838.1; PID:g398711
A;Note: single residue difference between this report and S18218 was investigated R;Freije, J.P.; Abrahamson, M.; Olafsson, I.; Velasco, G.; Grubb, A.; Lopez-Otin, J. Biol. Chem. 266, 20538-20543, 1991
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cystatin D precursor - form (man)
dynamics - form (man)
cystatin D con cloning, characterization of the Escherichia coli expres
A; Reference number: A47142; MUID:93340179; PMID:8340398
A; Status: preliminary
a; Status: preliminary
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Keywords: cysteine proteinase inhibitor; extracellular protein; saliva;
1-20/Domain: signal sequence #status predicted <SIG>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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A;Molecule type: protein
A;Residues: 27-49,'XX',52-64 <OLA>
A;Residues: 27-49,'XX',52-64 <OLA>
A;Residues: 27-49,'XX',52-64 <OLA>
A;Rote: this protein, purified from cerebrospinal fluid of patients with the autosomal a defective gene is not present in CSF but is found instead in amyloid deposits edifective gene is not present in CSF but is found instead in amyloid deposits R;Popovic, T.; Brzin, J.; Ritonja, A.; Turk, V.
Biol. Chem. Hoppe-Seyler 371, 575-580, 1990
A;Title: Different forms of human cystatin C.
A;Reference number: $10607; MUID:91025625; PMID:2222856
A;Accession: $10607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: protein
A;Residues: 27-76 <BRZ>
R;Olafsson, I.; Gudmundsson, G.; Abrahamson, M.; Jensson, O.; Grubb, A.
R;Olafsson, I. Gudmundsson, S., 85-93, 1990
Scand. J. Clin. Lab. Invest. 50, 85-93, 1990
A;Title: The amino terminal portion of cerebrospinal fluid cystatin C in
A;Reference number: A60552; MUID:90193615; PMID:2315647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 27-73 <TUR>
A;Residues: 27-73 <TUR>
R;Brzin, U; Popovic, T; Turk, V.
Biochem. Biophys. Res. Commun. 118, 103-109, 1984
Biochem. Biophys. Res. Commun. 118, 103-109, 1984
A;Title: Human cystatin, a new protein inhibitor of cysteine
A;Reference number: A32732; MUID:84128015; PMID:6365094
A;Accession: A32732
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A; Residues: 37-93, 'Q', '95-146 <GHI>
R; Turk, V.; Brzin, U.; Longer, M.; Ritonja, A.; Eropkin, M.; Borchart, U.; Machleidt, W. R; Turk, V.; Brzin, U.; Chem. 364, 1487-1496, 1983
A; Title: Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatia, Reference number: S01461; MUID:84110059; PMID:6662498
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A;Cross-references: EMBL:M27769
A;Cross-references: EMBL:M27769
A;Note: the authors translated the codon ACC for residue R;Grubb, A; Lofberg, H.
Proc. Natl. Acad. Sci. U.S.A. 79, 3024-3027, 1982
A;Title: Human gamma-trace, a basic microprotein: amino a A;Reference number: A01270; MUID:82222268; PMID:6283552
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A;Residues: 1-24, T', 26-146 <SAI>
A;Residues: 1-24, T', 26-146 <SAI
A;Reference: GB:M27889; GB:M27891; NID:g181385; PIDN:AAA52164.1; PID:g1
B;Gl. Chem. Hoppe-Seyler 369, 205-208, 1988
Biol. Chem. Hoppe-Seyler 369, 205-208, 1988
A;Title: Isolation of a sequence encoding human cystatin C. Conservation of exon-intron ;
A;Reference number: S02751; MUID:89076507; PMID:3264504
A;Accession: S02751
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A;Tklle: The human cystatin C gene (CST3) is a member of A;Reference number: A33400; MUID:89350949; PMID:2764935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: DNA
A;Residues: 1-146 <LEV>
A;Cross-references: GB:X61681; NID:g30367; PIDN:CAA43856.2; PID:g4490944
A;Note: the cystatin C gene isolated from the brain of an Icelandic patis
                                                    A;Experimental source: urine, kidne A;Note: truncated forms with amino R;Grubb, A.; Lofberg, H.; Barrett,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: protein
A;Residues: 27-131, S',133-146 <GRU>
R;Ghiso, J; Jensson, O.; Frangione, B.
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
Proc. Natl. Acad. Sci. U.S.A. 83, 2974-2978, 1986
A;Title: Amyloid fibrils in hereditary cerebral he
A;Reference number: A25434; MUID:86206076; PMID:35
A;Accession: A25434
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                            A.; Lofberg, H.
t. 170, 370-374,
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NyAlternate names: cystatin SA-I
C;Species: Homo sapiens (man)
C;Date: 28-May-1986 #sequence revision 08-Feb-1996 #text_change 08-Dec-2000
C;Accession: A28110; S02489; A29632; A01273; S19279
R;Al-Hashimi, I.; Dickinson, D.P.; Levine, M.J.
J. Biol. Chem. 263, 9381-9387, 1998
A;Title: Purification, molecular cloning, and sequencing of salivary cystatin A;Reference number: A28110; MUID:88243825; PMID:2837486
A;Accession: A28110
A;Molecule type: mRNA
A;Residues: 1-141 <ALH>
A;Cross-references: GB:JO3870; NID:g337751; PIDN:AAA60299.1; PID:g337752
A;Cross-references: GB:JO3870; NID:g337751; FIDN:AAA60299.1; PID:g337752
A;Gitch, E.; Isemura, S.; Sanada, K.; Kim, H.S.; Smithies, O.; Maeda, N.
Biol. Chem. Hoppe-Seyler 369, 191-197, 1988
A;Title: Cystatin superfamily. Evidence that family II cystatin genes are evolated to the compared with conceptual translation
A;Molecule type: DNA
A;Residues: 21-41 < SA22>
R;Saitch, E.; Kim, H.S.; Smithies, O.; Maeda, N.
Gene 61, 329-338, 1987
A;Title: Hyman Custatin serviceinase inhabitors: molecular conditions.
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A;Map position: 20p11.2-20p11.2
A;Introns: 81/3; 119/3
C;Superfamily: cystatin; cystatin homology
C;Superfamily: cystatin; cystatin bomology
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-146/Product: cystatin C #status experimental <MAT>
F;35-146/Domain: cystatin homology <CYS>
A;Molecule type: DNA
A;Residues: 1-86,'I',88-141 <SAI>
A;Residues: 1-86,'I',88-141 <SAI>
R;Isemura, S; Saitoh, E.; Sanada, K.
FEBS Lett. 198, 145-149, 1986
A;Title: Characterization of a new cysteine proteinase inhibitor of human saliva,
A;Reference number: A01273; MUID:86164938; PMID:3514272
A;Accession: A01273
                                                                                                                                                                                                                                                A;Title: Human cysteine-proteinase inhibitors: nucleotide sequence analysis of three men A;Reference number: A91589; MUID:88185836; PMID:3446578 A;Accession: A29632
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F;29/Modified site: hydroxyproline (Pro) (partial) #status experimental
F;99-109,123-143/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Comment: This protein is found in the post-gamma-globulin fraction of cerebrosp f pattents with certain autoimmune diseases. C;Comment: This protein is an inhibitor of cysteine proteinases and may serve an C;Comment: A mutant cystatin C, with 94-Gln, is deposited in hereditary cerebral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biochem. J. 302, 411-416, 1994
A;Title: Local pH-dependent conformational changes leading to proteolytic susceptibility
A;Reference number: S55305; MUID:94379969; PMID:8092991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cystatin SN precursor (validated) -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene: GDB: CST3
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Best Local S
Matches 16
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38.1%;
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PEBS Lett. 186, 41-45, 1985

A;Title: Complete amino acid sequence of bovine colostrum low-M-r
A;Reference number: A01271; MUID:85231205; PMID:3891407
A;Accession: A01271
                                                                                                                                                                                                   N;Alternate names: thiol proteinase inhibitor C;Species: Bos primigenius taurus (cattle) C;Date: 28-Feb-1986 #sequence_revision 28-Feb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochem. J. 246, 799-802, 1987
A;Title: Amino acid sequence of a cystatin from venom of the African puff adder (Bitis A;Reference number: A28793; MUID:88076861; PMID:3500714
A;Accession: A28793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Keywords: cysteine proteinase inhibitor; extracellular protein; saliva F;1-20/Domain: signal sequence #status predicted <SIG> F;21-141/Product: cystatin SA-I #status experimental <MAT1> F;29-141/Product: cystatin SN #status experimental <MAT2> F;30-141/Domain: cystatin homology <CYS> F;76-80/Region: inhibitory #status predicted F;94-104,118-138/Disulfide bonds: #status predicted
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A;Title: Large-scale purification and characterization of the major phosphoprotei A;Reference number: S19279; MUID:92082469; PMID:1747107
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A; Molecule type: protein A; Residues: 1-112 <HIR> C; Superfamily: cystatin;
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C; Superfamily: cystatin; cystatin homology
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                                                                                                                                                             C;Accession: A01271
R;Hirado, M.; Tsunasawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
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;Species: Bitis arietans (puff adder)
;Date: 15 Dec-1988 #sequence_revision
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16; Conserv
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15; Conserv
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  cystatin homology
                                                                                                                                                          S.; Sakiyama, F.; Niinobe,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
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Pred. No. 0.81;
10; Mismatches
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Pred. No. 0.27
6; Mismatches
                                                                                                                                                                                                       (cattle)
sion 28-Feb-1986 #text_change 06-Dec-1996
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                                                                                                                                                             M.; Fujii,
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C;Superfamily: Kininogen; cystatin homology
C;Keywordds: alternative splicing; blood cosquiation; cysteine proteinase inhibitor; glyc
F;1-18/Domain: signal sequence #status predicted <8IG>
F;19-434/Product: LMW kininogen II #status predicted <MAT>
F;19-377/Product: LMW kininogen I heavy chain #status predicted <HCH>
F;19-130/Domain: cystatin homology <CY1>
F;19-130/Domain: cystatin homology <CY2>
F;261-372/Domain: cystatin homology <CY2>
F;261-372/Domain: cystatin homology <CY3>
F;377-386/Product: LMW kininogen I kallidin II) #status predicted <HBDY>
F;377-386/Product: LMW kininogen I light chain #status experimental <LCH>
F;378-386/Product: LMW kininogen I light chain #status experimental <LCH>
F;377-434/Product: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;37-404,82-93,106-125,141-144,205-217,228-247,261-264,325-337,348-367/Disulfide bonds:
F;47,87,168,169,197,204,280/Binding site: carbobydrate (Asn) (covalent) #status predicted
F;376-377/Cleavage site: Met-Lys (kallikrein) #status predicted
F;380/Modified site: 4-hydroxyproline (Pro) #status predicted
F;380/Modified site: 4-hydroxyproline (Pro) #status predicted
F;380/Modified site: 4-hydroxyproline (Pro) #status predicted
                       N;Alternate names: alpha-2-thiol proteinase inhibitor; preprokininogen N;Contains: bradykinin (kallidin); kininogen I; kininogen II; prokininogen C;Species: Bos primigenius taurus (cattle) C;Pate: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 22-Jun-1999 R;Nawa, H.; Kitamura, N.; Hirose, T.; Asai, M.; Inayama, S.; Nakanishi, S. Proc. Natl. Acad. Sci. U.S.A. 80, 90-94, 1983 Proc. Natl. Acad. Sci. U.S.A. 80, 90-94, 1983 #text_change revision 1999 Molecular weight kininogen A;Title: Primary structures of bovine liver low molecular weight kininogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:V00427; GB:J00011; NID:g489; PIDN:CAA23710.1; PID:g490 C;Comment: The LMW kininogen precursor is produced from the same gene as the HMW form a c;Comment: Kininogen is a cysteine proteinase inhibitor, takes part in initiation of the c;Comment: Bradykinin, released from kininogen by kallikrein, is a potent vasodilator, xyproline residue is present in the kininogen prior to the release of bradykinin. C;Superfamily: kininogen; cystatin homology C;Keywords: alternative splicing; blood coagulation; cysteine proteinase inhibitor; gly C;Keywords: alternative splicing; blood coagulation; cysteine proteinase inhibitor; gly F;1-18/Domain: signal sequence #status predicted <SIG>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Nawa, H.; Kitamura, N.; Hirose, T.; Asai, M.; Inayama, S.; Nakanishi, S. Proc. Natl. Acad. Sci. U.S.A. 80, 90-94, 193. A;Title: Primary structures of bovine liver low molecular weight kininogen precursors A;Reference number: A93984; MUID:83117859; PMID:6572010 A;Accession: A01284 A;Molecule type: mRNA A;Residues: 1-434 <NAW>
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A; Reference number:
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                                                                                                                                                                                                                                                                                                                                             kininogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 17
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;48-52/Region: inhibitory #status predicted
;66-76,90-110/Disulfide bonds: #status predicted
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Best Local
                                                                                                                                                                                                                                                                                                                                         LMW I precursor -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCQKPE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCSKGSNEELTKSC---
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   MUID:83117859;
                                                                                                                                                                                                                                                                                                                                             bovine
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Pred. No. 1
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8; Mismatches
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Pred. No. 8.2;
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   PMID:6572010
                               low molecular weight kininogen precursors
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                                                                   A; Accession: A91938
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kininogen, HMW II precursor - bovine
N;Alternate names: alpha-2-thiol proteinase inhibitor; preprokininogen
N;Contains: bradykinin (kallidin); kininogen I; kininogen II; prokinin
                                                                                                                                                                                                                                                                                                                                                                                                 F;19/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted F;27-406,82-93,106-125,141-144,205-217,228-247,263-266,327-339,350-369/Disulfide bonds: F;47,87,168,169,197,204/Binding site: carbohydrate (Asn) (covalent) #status predicted F;378-379/Cleavage site: Met-Lys (kallikrein) #status predicted F;388/Modified site: 4-hydroxyproline (Pro) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:J00010; GB:V00426; NID:g163256; PIDN:AAA30604.1; PID:g163257 G;Comment: The LMW kininogen precursor is produced from the same gene as the HMW form a G;Comment: Kininogen is a cysteine proteinase inhibitor, takes part in initiation of th G;Comment: Bradykinin, released from kininogen by Kallikrein, is a potent vasodilator, xyproline residue is present in the kininogen prior to the release of bradykinin.
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                                                                                                                                                                                                                                                                                                            Local
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17; Conserv
                                                                                                                                                                                  TTCSKGSNEELTKSC---EINIHGQILHCDANVYVVPWEEKVYPTVN
                                                                                                                                                                                                                              TTCQKPE----TTNCVPQERELHKQV-NCFFSVFAVPWFEQ-YKILN
                                                                                                                                                                                                                                                                          21.8%;
nilarity 36.2%;
Conservative
                                                                                                                                                                                                                                                                             Score 59.5; DB Pred. No. 8.2; 8; Mismatches
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                                                                                                                                                                                                                                                                                                                              Length 436;
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                                                                                                                                                                                  368
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       prokininogen
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R;Kitamura, N.; Takagaki, Y.; Furuto, S.; Tanaka, Nature 305, 545-549, 1983
A;Title: A single gene for bovine high molecular 1 C;Species: Bos primigenius taurus (cattle)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 22-Jun-1999
C;Accession: A01282; A91923; A91941; A91938; B29559 A;Cross-references: GB:V01492; GB:K01758; NID:g493; PIDN:CAA24736.1; PID:g494 R;Kato, H.; Nagasawa, S.; Suzuki, T. J. Biochem. 67, 313-323, 1970 A; Molecule type: mRNA A; Residues: 1-619 < KIT> A,Title: Studies on the primary structure of bovine high-molecular-weight kininogen. A,Reference number: A91938; MUID:75170265; PMID:1169237 R;Han, Y.N.; Kato, H.; Iwanaga, J. Biochem. 79, 1201-1222, 1976 A;Title: Primary structure of b A; Reference number: A93317; A;Residues: A; Note: A;Molecule type: protein A;Accession: A91941 A;Molecule type: protein A;Residues: 376-391 <KAT> A; Accession: A91923 A; Accession: A01282 Title: Primary structure of bovine plasma high-molecular-weight kininogen.;Reference number: A91941; MUID:76260155; PMID:956151 ;Title: Studies on the structure of bovine kininogen: ;Reference number: A91923; MUID:70180420; PMID:4986212 Residues: 387-455 <HAN>
Note: 398-Pro, 401-Val, and 455-Lys were also
Han, Y.N.; Komiya, M.; Iwanaga, S.; Suzuki, T.
Biochem. 77, 55-68, 1975 for bovine high molecular weight and 3317; MUID:84014106; PMID:6571699 S.; Suzuki, T.; Nawa, cleavages low molecular weight kininoge H.; Nakanishi, of disulfide bonds and တ The amino

:ype: protein 456-496 <HA2

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F;117-152/Domain: Cystatin homology <CY2>
F;261-372/Domain: Cystatin homology <CY3>
F;261-372/Domain: Cystatin homology <CY3>
F;377-386/Product: lysyl-bradykinin (kallidin I) #status experimental <BDY>
F;377-386/Product: bradykinin (kallidin I) #status experimental <BDY>
F;378-619/Product: hww kininogen II light chain #status experimental <LCH>
F;418-489/Region: glycine/histidine/lysine-rich
F;19/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status experiment
F;19/Modified site: carbohydrate (Asn) (covalent) #status absent
F;27-589,82-93,106-125,141-144,205-217,228-247,261-264,235-337,348-367/Disulfide bonds:
F;47/Binding site: carbohydrate (Asn) (covalent) #status absent
F;87,168,169,204,280/Binding site: carbohydrate (Asn) (covalent) #status experimental
F;381Abinding site: carbohydrate (Asn) (covalent) (partial) #status experimental
F;376-377/Cleavage site: Met-Lys (kallikrein) #status experimental
F;386-387/Cleavage site: Arg-Ser (kallikrein) #status experimental
F;380,400,404,510/Binding site: carbohydrate (Ser) (covalent) #status experimental
F;397,398,518,222,534,546,551,568/Binding site: carbohydrate (Thr) (covalent) #status experimental
F;380-497/Cleavage site: Arg-Thr (kallikrein) #status experimental
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A;Title: Bovine high molecular weight kininogen. The amino acid sequence, positions of a,Reference number: A92627; MUID:87137530; PMID:3546295
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A;Contents: annotation; bovine cleavage sites; bovine carbohydrate binding sites A;Sueyoshi, T.; Miyata, T.; Kato, H.; Iwanaga, S.
Search completed: March 23, 2004, 17:14:32
Job time : 8.83682 secs
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Eur. J. Biochem. 152,
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Best Local :
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'Z',20-104,'E',106-256,'XX',257-376 <SUE>
'R' : Kellermann, J.; Henschen, A.; Foertsch,
                                                                                                                                                                                                                             7 TTCOKPE----TTNCVPQERELHKQV-NCFFSVFAVPWFEQ-YKILN 47
                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                       TTCSKGSNEELTKSC---BINIHGQILHCDANVYVVPWEEKVYPTVN 366
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Result
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                                                                                                                                                                                                                                                                      Score
                                                                                                   273
1107.5
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100.5
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seq length:
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                                                                                                                                                                                                                                                                      Query
Match
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273
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36.8
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  Maximum Match 100%
Listing first 45 su
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  GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd
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CYT HUMAN
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CS11 MOUSE
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CYT CHICK
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        P28325 homo
P01034 homo
O19092 macac.
O19092 macac.
O10037 homo
O76096 homo
P35481 cypri:
P01035 bos t.
089098 mus m
P01047 bos t.
P01046 bos t.
P01045 bos t.
P01046 mus m
O18179 caseno
O15828 homo
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P32766
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5 bitis ariet
5 bos taurus
8 mus musculu
7 bos taurus
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Q04790 bos taurus	P22644 xanthobacte										P26684 rattus norv

ALIGNMENTS

CS11_HUMAN Q9H112; Q9H113;

STANDARD;

137

B

update)

update)

Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.

CS11 HUMAN
ID CS11 H
AC Q9H112
DT 28-FEB
DT 28 RX MEDLLINE=21638749; Pubmedeal1780052;
RX MEDLLINE=21638749; Pubmedeal1780052;
RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Deloukas P., Matthews L.H., Ashurst J.P., Babbage A.K., Bagguley C.L.,
RA Deloukas P., Matthews L.H., Ashurst J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Coulson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Grafham D.V., Griffiths C., Griffiths M.N.D., Gwilliam R., Hall R.E.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimstry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Milne S.J., M. Whittaker P., Willey D.L., Williams S.A.,
RA Mitchead S.L., Whittaker P., Willey D.L., Williams S.A.,
RA Milms G., Wary P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Roders J. 28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence upda
28-FEB-2003 (Rel. 41, Last annotation up
Cystatin 11 precursor.
CST11 OR CST8L.
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata;
Mammalia; Eutheria; Primates; Catarrhini "The DNA sequence and comparative analysis of human chromosome 20.";
Nature 414:865-871(2001).
-!- SUBCELLULAR LOCATION: Secreted (Potential).
-!- ALTERNATIVE PRODUCTS:
Event_Alternative splicing; Named isoforms=2; This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its Rogers SEQUENCE FROM N.A. Note=No experimental confirmation available; SIMILARITY: Belongs to the cystatin family. IsoId=Q9H112-1; Sequence=Displayed; IsoId=Q9H112-2; Sequence=VSP_001260; (ISOFORMS 1 AND 2).

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RESULT 2

CS11_MOUSE

ID CS11 MOUSE

AC Q9D269;

DT 28-FEB-2003 |

CST11.

REMINITE 11 |

GN CSTIL 11 |

GN CSTIL TAXID=11 |

RN SEQUENCE FROM STRAIN=C57BL, MA

CO Mammalia; But OX NCBI TAXID=10 |

RN SEQUENCE FROM STRAIN=C57BL, MA

RA SEQUENCE FROM STRAIN=C57BL, MA

RA ALABAWA T., 11

RA ALABAWA T., 11

RA ALABAWA T., 11

RA ALABAWA T., 11

RA Saito T., 04

RA Saito T
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RM MEDLINE-21085660; pubMed-11217851;

RA May A., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Alzawa K., Jakesuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matesuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Fleischmann W., Satubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Washio T.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Gariboldi M.F.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,

RA Gustincich S., Hill D., Hofmann M., Rodriguez I., Sakamoto N.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Havashiraki Y., Storch K., F.,

RA Havashiraki Y., Storch K.-F.,

RA Havashiraki Y., Storch K.-F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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                                                                                "Functional annotation of a full-length mouse Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
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SMART; SM00043; CY; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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(Rel. 41,
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                                                           LOCATION: Secreted (Potential).
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hibitor; Signal; Alternative
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Rodentia;
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                                to the cystatin family.
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SECONDARY BAREA OF CONTACT |
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . .) (POI
MISSING (in isoform 2).
/FTId=VSP 001260.
W; C585C8C39A585C3B CRC64;
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Pred. No. 4.4e-29;
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01-OCT-1993 (Rel
30-MAY-2000 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
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                                                                                                                                                                                                                                   STRAIN=C3H, and CD-1;
STRAIN=99247899; PubMed=10229662;
MEDLINE=99247899; PubMed=10229662;
Cornwall G.A., Hsia N., Sutton H.G.;
Cornwall G.A., alternative splicing and
           -
                                                                                                       of the mouse epididymis.";
Mol. Endocrinol. 6:1653-1664(1992)
                                                                                                                            TISSUE=Epididymis;

MEDLINE=93078799; PubMed=1280328;

Cornwall G.A., Orgebin-Crist M.-C., Hann &

"The CRES gene: a unique testis-regulated

family is highly restricted in its express
                                                                                                                                                                                                                          "Structure, alternative splicing cystatin-related epididymal sperm
                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                   30-MAY 2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Cystatin-related epididymal spermatogenic protein
related epididymal specific protein) (Cystatin 8).
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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Thiol protection
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[nterPro; IPR000010; Cyi
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        SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: Proximal caput region of the epididyn expression in the testis. Within the testis it is localize elongating spermatide, whereas within the epididymis it exclusively synthesized by the proximal caput epithelium. INDUCTION: Testicular factors or hormones other than and
                                                                                            FUNCTION: Performs
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O88969;
30-MAY-2000
30-MAY-2000
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-Sprague-Dawley; TISSUE-Epididymis;
STRAIN-Sprague-Dawley; TISSUE-Epididymis;
MEDLINE-9924789; PubMed=10229662;
Cornwall G.A., Hsia N., Sutton H.G.;
"Structure, alternative splicing and chromosomal localization "Structure, alternative splicing and chromosomal localization of the structure, alternative splicing and chromosomal localization of the structure, alternative splicing and chromosomal localization of the structure, alternative splicing and chromosomal localization of the structure.
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EMBL; AF090691; AAC36316.1; -.
EMBL; S49926; AAC35390.1; -.
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                                             This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
                                                                                                                                                                                                                                                                                                                                    cystatin-related epididymal spermatogenic Biochem. J. 340:85-93(1999).
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Mammalia; Eutheria; Rodentia;
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MGI:107161; Cst8
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BY SIMILARITY.
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N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
PLWLSLILFIIP -> GTRUDEQVGEQK (IN REF.
508446E98F66673E CRC64;
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RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.B., Collier R.B., Connor R.B., Corby N.R.,
RA Clegg S., Cobley V.B., Collier R.B., Connor R.B., Corby N.R.,
RA Clegg S., Cobley V.B., Collier R.B., Connor R.B., Corby N.R.,
RA Clegg S., Cobley V.B., Collier R.B., Connor R.B., Corby N.R.,
RA Clegg S., Cobley V.B., Collier R.B., Connor R.B., Corby N.R.,
RA Hammond S., Harley J.L., Heath P.D., Hos, Holden JL., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden JL., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kinberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Oliver K., Parker A., Patel R., Pearce T.A.V., Peck A.I.,
RA Nice C.D., Smith M.L., Soderlund C., Steward C.A., Sulston J.E.,
RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Whitehead S.L., Way P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA ROgers J.;
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Best Local S
Matches 19
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28-FEB-2003
28-FEB-2003
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Q9H114;
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                                       "The DNA sequence and co
Nature 414:865-871(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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SMART; SM00043; CY; 1.
Thiol protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=21638749; PubMed=11780052;
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SIMILARITY: Belongs to
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(Rel. 41, Last sequence up
(Rel. 41, Last annotation
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N-LINKED (GLCNAC.
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16; Mismatches
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FB873FAA6B6CAB34 CRC64;
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30-MAY-2000
30-MAY-2000
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Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., Jones M., Stavrides G., Almeida J.P., Babbage A.K., Baguley C.L., Babiley J., Barbow K.F., Bates K.N., Beard L.M., Beare D.M., Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J., Buck D., Burler A.P., Carder C., Carter N.P., Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.P., Cobley V.E., Collier R.E., Connor R.E., Corby N.R., Coulson A., Coville G.J., Deadman R., Dami P.D., Dunn M., Ellington A.G., Frankland J.A., Fraser A., French L., Garner P., Graffiths C., Griffiths M.N.D., Gwilliam R., Hall R. Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CST8_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
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HSSP; P01038; 1A90.
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or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                        Cornwall G.A., Hann S.
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Primates;
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SECONDARY AREA C
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N-LINKED (GLCNAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 165;
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RESULT CST9_HU ID CS AC Q9 DT 28 DT 28 DT 10 DE CY GN CS

CST9 HUMAN

HUMAN

STANDARD;

PRT;

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Q9H4G1; 28-FEB-2003 (Rel. 28-FEB-2003 (Rel. 10-OCT-2003 (Rel. Cystatin 9-like p

(Rel. 41, Created) (Rel. 41, Last seq (Rel. 42, Last ann

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Cystatin CST9L.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rogers J.
                                                                                                                                                                                                                                                                                                                                                                     SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restrues by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entitles requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AL109954; CAE
HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The DNA sequence and comparative analysis of human chromosome Nature 414 \colon 865 - 871 \ (2001) .
                                                                                                                                                                                                                                               VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Huckle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0004869; F:cysteine pro
InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thiol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Зепеw;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- FUNCTION: Performs a specialized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted.

TISSUB SPECIFICITY: Proximal caput region of the epididym expression in the testis. Within the testis it is localiz elongating spermatids, whereas within the epididymis it is exclusively synthesized by the proximal caput epithelium. SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF00031; cystatin;
; SM00043; CY; 1.
protease inhibitor;
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                                                                                               l Similarity
18; Conserv
THE STATE OF THE S
                                               NVEMONTTCQKPETTN--CVPQER-ELHKQVNCFFSVFAVPWFEQYKILNK
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                                                                                                                                                                                             142 AA;
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95
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                                                                                               Conservative
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                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protease inhibitor activity; TAS
                                                                                             Score 85.5; D
Pred. No. 0.00
L5; Mismatches
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N-LINKED (GLCNAC. . .) (PO
N-LINKED (GLCNAC. . .) (PO
N-> P (in dbsNP:1054633).
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CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC
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9A3512757E0F4ECD
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., Laird G.K.,
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                                                                                                                                                                                                                                                                                                                                                                     CONTACT
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                                                                                               Indels
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RA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R.,
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Bailey J., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
RA Clegg S., Cobley V.E., Collier R.B., Connor R.D., Dunn M.,
RA Clegg S., Cobley V.E., Collier R.B., Connor R.D., Gwilliam R., Hall R.E.,
RA Clegg S., Cobley V.E., Reach P.D., Holbani P.D., Dunn M.,
RA Clegg S., Cobley V.E., Heath P.D., Ho.S., Holden J.L., Howler P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howler P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Manns N.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Phillimore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsey H.,
RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Swann R.M., Sycamore N., Taylor R., Tee L., Thomas D.W., Thorpe A.,
RA Wilnend S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Kay M., Thorpe A., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-leng human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

-!- SUBCELLULAR LOCATION: Secreted (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakeslov B.
                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                                          or send
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rogers
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                                             P01038; 1A90.
; HGNC:16233; CST9L.
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IPR000010;
                                                                                                                                                                                                                                                                                          email to license@isb-sib.ch).
                                                                                                                                        CAC05421.1;
AAH29656.1;
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Cystatin
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RESULT 8
CYT_CHICK
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Best Local &
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=90008873; PubMed=2793849;
MEDLINE=90008873; PubMed=2793849;
MEDLINE=90008873; PubMed=2793849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYT_CHICK
P01038;
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DISULFID
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CHAIN
                                                                                                                        Sunter D.C., Barrett A.J.; "Cystatin, a protein inhibitor of cysteine proteinases. Impropurification from egg white, characterization, and detection
                                                                                                                                                                                                      of cystatin from chicken egg white.";
Hoppe-Seyler's Z. Physiol. Chem. 364:
                                                                                                                                                                                                                                                                                         MEDLINE=84178305; PubMed=6712597; Schwabe C., Anastasi A., Crow H., "Cystatin. Amino acid sequence and Biochem. J. 217:813-817(1984).
                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cystatin precursor (Egg-Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JUL-1986 (Rel. 01, Created)
01-OCT-1989 (Rel. 12, Last sequence up
28-FEB-2003 (Rel. 41, Last annotation
PHOSPHORYLATION.
MEDLINE=89252033; PubMed=2721673;
Laber B., Krieglstein K., Hensche
                                                                           Grubb
                                                                                                        chicken serum.";
Biochem. J. 211:129-138(1983).
                                                                                                                                                         Anastasi A., Brown M.A., Kembhavi
                                                                                                                                                                                                                                                 Turk V.,
                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 24-139.
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                                                               "The disulphide
                                                                                                                                                                     MEDLINE=83256421; PubMed=6409085;
                                                                                                                                                                                 CHARACTERIZATION OF PROTEIN
                                                                                                                                                                                                                                       Machleidt
                                                                                                                                                                                                                                                          MEDLINE=84110059; PubMed=6662498;
                                                                                                                                                                                                                                                                                                                                                                 "Chicken egg white cysta
and tissue distribution.
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                                           FEBS Lett.
                                                                          Grubb A., Loefbe
                                                                                                                                                                                                                          "Protein inhibitors of cysteine proteinases.
                                                                                                                                                                                                                                                                                                                                                         Biol.
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                                                                                                                                                                                                                                                                      QF
                                                                                                                                                                                                                                                                                                                                                         Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    precursor (Egg-white cystatin)
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                                                              Loefberg H., E
Lphide bridges
                                           170:370-374(1984)
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                                                                                                                                                                                                                                                                                                                                                        264:17164-17169(1989)
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                                                                           Barrett A.J.;
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  Henschen
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CYSTATIN 9-LIKE.
BY SIMILARITY.
BY SIMILARITY.
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Pred. No. 0
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                                                               cystatin
                                                                                                                                                           A.A.,
                                                                                                                                                                                                                                                                                                   McDonald J.K., Barrett A.J.;
1 possible secondary structur
  Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
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  Turk V., Huber
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CRC64;
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                                                                                                                                                                                                                                                                                                    structure.";
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                                                                                                                                                            Sayers C.A.,
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                                                                 and chicken
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phosphoprotein.

248:162-168(1989)

cysteine proteinase inhibitor chicken cystatin is a

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87

VEIGRTTCPKSSGDLQSCEFHDEPEMAKYTTCTFVVYSIPWLNQIKLL

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Best Local S
Matches 18
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STRAND
TURN
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STRAND
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STRAND
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HELIX
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SMART; SM00043; CY; 1.
PROSITE; PS00287; CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBI outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. MOI. Biol. 234:1048-1059(1993).
-- FUNCTION: This protein binds tightly to and inhibits a variety thiol proteases including ficin, papain, and cathepsins B, C, I and L. Although isolated from egg white, it is also present in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=94087719; PubMed=8263912;
Dieckmann T., Mitschang L., Hofmann M., Kos J., Turk V.,
Auerswald E.A., Jeanicke R., Oschkinat H.;
"The structures of native phosphorylated chicken cystatin recombinant unphosphorylated variant in solution.";
                                                                                                                                                                                    TURN
                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bode W., Engh R., Musil D., Thiele U., Huber R., Brzin J., Kos J., Turk V.;
                                                                                SEQUENCE
                                                                                           STRAND
                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                        SIGNAL
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MEDLINE=89052676; PubMed=3191914;
                                                                                                                                                                                                                                                                                                                                   Thiol
                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e 2.0 A X-ray crystal structure of possible mode of interaction with J. 7:2593-2599(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                         1A90; 17-JUN-98.
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1CEW; 31-JAN-
                                                                                                                                                                                                                                                                                                                                  protease
                                    18;
2 VEMONTTCQKP--ETTNC-VPQERELHKQVNCFFSVFAVPWFEQYKIL 46
                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                     27-MAY-98.
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                                    Conservative
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                                                                                                                                                                                                                                                                                                                                   inhibitor;
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REACTIVE SITE.
SECONDARY AREA
                                   8;
                                  Score 79.5; DB 1; 1
Pred. No. 0.0017;
8; Mismatches 19;
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                                                                               D92D1131C4D37891 CRC64;
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                                                      DB 1;
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                                                        Length 139;
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RESULT 10
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                                                                                                                                                                             01-APR-1990
01-APR-1990
28-FEB-2003
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P81061;
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15-JUL-1998 (Rel. 36, Last sequence up
28-FEB-2003 (Rel. 41, Last annotation
Cystatin (Egg-white cystatin).
cysteine proteinase inhibitor cystatin C and for harmanian in rat brain.";
                                       MEDLINE=90092122; PubMed=2689174; Cole T., Dickson P.W., Esnard F., Gauthier F., Schreiber G.;
                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                P14841;
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                           SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                          STRAIN=Buffalo;
                                                                                   SEQUENCE FROM N.A.
                                                                                                      NCBI_TaxID=10116;
                                                                                                                                           Rattus norvegicus (Rat).
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                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART;
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HSSP; P01038; 1CEW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEBS Lett.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             interPro;
                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                   ol protease inhibitor;
_SITE 9 9
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                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                       VEMOWITICOK--PETINC-VPQERELHKQVNCFFSVFAVPWFEQYKIL
                                                                                                                                                                                                                                                                                 VEIGRTTCPKSSADLQSCEFHDEPEMAKYTTCNFVVYSIPWLNQIKLL
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53
71
95
95
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116 AA;
                                                                                                                                                                  precursor
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                                                                                                                                                                           (Rel. 14, Created)
(Rel. 14, Last sequence update)
(Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                Conservative
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115
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                                                                                                                      Chordata;
Rodentia;
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REACTIVE SIT
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3; Mismatches
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Pred. No. 0.
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                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                            48248621053A2F70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cystatin family.
                                                  Averill F., Risbridger
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                beta 2-microglobulin
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SEQUENCE

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8-127.

J. Biochem. 186:35-42(1989)

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CYTC SAISC
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AC 01903;
DT 15-JUL-1
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DE Cystatin
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Best Local S
Matches 17
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; X16957; CAA34831.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=92225121; PubMed=1563513;
Esnard A., Esnard F., Guillou F., Gautl
"Production of the cysteine proteinase
  Cystatin
                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                  SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                               PIR; S07085; S07085.
PIR; S10587; S10587.
                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sertoli cells."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=88313020; PubMed=3044831; Banard F., Faucher D., Gauthier F.; Two rat homologues of human cystatin C."; FEBS Lett. 236:475-478(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-glycosylation.";
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Esnard F., Esnard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     icli cells. (135-135-135-135).

FUNCTION: As an inhibitor of cysteine proteinases, procedure an important physiological role a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        regulator of this enzyme activity. Known H, and L.
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                                                          SAISC
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                                                                                                                     72
                                                                                                                                          1 NVEMOWITCOKPET - TNC-VPQERELHKQVNCFFSVFAVPW 39
                                                                                                                                                                             Similarity
                                                                                                                     DVEMGRTTCTKSQTNLTNCPFHDQPHLMRKALCSFQIYSVPW
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(Rel. 36, Last seq
(Rel. 41, Last anno
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REACTIVE SITE.
SECONDARY AREA (
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                   8,
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Pred. No. 0.0021;
B; Mismatches 1
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78F70158B7925853
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RESULT 12
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P01036; O9UBI5; Q9UCS9;
21-JUL-1986 (Rel. 01, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
15-MAR-2004 (Rel. 43, Cast annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
SEQUENCE FROM N.A. Saitoh E., Isemura
                                    Bobek L.A., Aguirre A., Levine M.J.; "Human salivary cystatin S. Cloning, in situ and immunocytochemistry."; Biochem. J. 278:627-635(1991).
                                                                                SEQUENCE FROM N.A.
TISSUE=Submandibular gland;
MEDLINE=91378918; PubMed=1898352;
                                                                                                                                                Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                           HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wei L.H., Walker L.C., Levy B.; "Cystatin C. Icelandic-like mutation cerebrovascular beta-amyloidosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97054523; PubMed=8898820; Wei L.H., Walker L.C., Levy E.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Cebinae; Saimiri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saimiri sciureus (Common squirrel monkey).
Eukaryota; Metazoa; Chordata; Craniata; Ve
                                                                                                                                  NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    regulator of this enzyme activity. SIMILARITY: Belongs to the cystatin family.
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17; Conserv
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Primates;
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Sanada
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BY SIMILARITY.
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×.
                                                                                                                                                Craniata; Vertebrata; Catarrhini; Hominidae;
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 Ohnishi
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No. 0.
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                                                             sequence analysis, hybridization
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PARA Deloukas P., Matthews L.H., Ashurst J., Burton J., Gilbert J.G.R., RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L., RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M., RA Bailey J., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J., Baseley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J., RA Baseley O.P., Bird C.P., Blakey S.B., Bridgeman A.M., Brown A.J., Baseley G., Colley N.B., Clark L.N., Clark S.Y., Clee C.M., Chark D.D., Burnham J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M., RA Clegg S., Cobley V.B., Collier R.E., Connor R.B., Corby N.R., RA Clegg S., Cobley V.B., Collier R.E., Connor R.B., Corby N.R., RA Clegg S., Cobley V.B., Clark G., Frankland J.A., Fraser A., French L., Garner P., RA Cligon A.G., Frankland J.A., Fraser A., French L., Garner P., RA Ellington A.G., Frankland J.A., Fraser B.M., D., Gwilliam R., Hall R.B., RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J., RA Humtole S., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Huckle E., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Huckle E., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Huckle E., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Huckle E., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Huckle E., Hunt S.B., Jekosch K., Johnson C.M., Johnson D., RA Marsh V.L., Mattrin S.L., McConnachie L.J., McLay K., McMurray A.A., RA Milne S.A., Histry D., Moore M.J.F., Mullikin J.C., Nickerson T., RA Milne S.A., Histry D., Moore M.J.F., Mullikin J.C., Nickerson T., RA Patel R.S., Patel R., Pearce T.A.V., Peck A.I., Pilmb R.M., Sydmas H., Sydmas S.A., Ra Swann R.M., Sydmore N., Taylor R., Tecey A., Tromans A.C., Vaudin M., Walli M., Wallis J.M., Thorpe A., Ra Williams L., Williams S.A., Williams S.A., Whittehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A., Ra Milne S.A., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hawke D.H., Yuan P.M., Wilson A Hawke D.H., Yuan P.M., Wilson A "Identification of a long form microbore HPLC mapping."; Picchem. Biophys. Res. Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dickinson D.P., "Acquisition of epithelial cell
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[3]
                                                MEDLINE=92074898; PubMed=1741693; Johnsson M., Richardson C.F., Ber
                                                                                                                                                                                                                                           Isemura S. Saitch E., Sanada K., Mi
"Identification of full-sized forms
(cystatin SN, cystatin SA, cystatin
cystatin S) in human whole saliva ar
                         Johnsson M., R
Nancollas G.H.
                                                                                                                                     SEQUENCE OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochem.
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                                                                                                              SSUE=Saliva;
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ochem. 110:648-654(1991).
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414:865-871(2001)
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MEDLINE=85104877; Publ
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Arch. Oral Biol. 36:631-636(1991)
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"Cystatin S:
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Biochem. 96:489-498(1984).
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A Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Bailey J., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Chapman J.C., Clamp M., Clark G., Clark L.N., Clark S.Y., Clee C.M.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
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RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Hammond S., Harley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Huckle E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley J.L., Heath P.D., Ho S., Holden J.L., Howden P.J.,
RA Lehvaeslaiho M.H., Leversha M.A., Lloyd C., Lloyd D.M., Lovell J.D.,
RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Kice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Teeta L., Thomas D.W., Thorpe A.,
RA Whitehead S.L., Whittaker P., Willey D.L., Williams L., Williams S.A.,
RA Wilming L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
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                                                              Isemura S., Saitoh E., Sanada K.;
"Characterization and amino acid sequence of a new acidic cysteine proteinase inhibitor (cystatin SA) structurally closely related to cystatin S, from human whole saliva.";
J. Biochem. 102:693-704(1987).
                                                                                                                                                                                                                                                                                                                                                  Isemura S., Saitoh E., Sanada K., Minakata K.;
"Identification of full-sized forms of salivary (S-type) cystatins
(cystatin SN, cystatin SA, cystatin S, and two phosphorylated forms of
cystatin S) in human whole saliva and determination of phosphorylation
sites of cystatin S.";
J. Biochem. 110:648-654(1991).
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Saitoh E., Kim H.-S., Smithies O., Maeda N.;
"Human cysteine-proteinase inhibitors: nucleotide sequence of three members of the cystatin gene family.";
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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414:865-871(2001)
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16-OCT-2001
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M19673; AAA36116.1; --
EMBL; M19671; AAA36116.1; JOINED.
EMBL; M19672; AAA36116.1; JOINED.
EMBL; AL591074; CAC94784.1; --
PIR; B29632; B29632.
HSSP; P01034; 1G96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Saitoh E., Isemura S., Sanada K., Kim H.-S., Smithies O., "Cystatin superfamily. Evidence that family II cystatin gevolutionarily related to family II cystatin genes."; Biol. Chem. Hoppe-Seyler 369:191-197(1988).

-!- FUNCTION: Thiol protease inhibitor.
-!- SUBCELLULAR LOCATION: Secreted.
                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                    097862;
                                                                                                                                                                             RABIT
                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIM; 123856; -.
GO:0004869; F:cysteine
InterPro; IPR000010; Cystat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and foentiles requires a license agreement (See http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cysteine proteinases and their inhibitors, pp.497-505. Walter de Gruyter, Berlin and New York (1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isemura S., Saitoh E., Sanada K., Isemura M., It "Characterization and amino acid sequence of a r proteinase inhibitor (cystatin SA) structurally
             SEQUENCE FROM N
                                                                         Oryctolagus
                                                                                                    Cystatin
                                                                                                                                                                   CYTC
                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00031; cystatin; SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=89076505; PubMed=3202964;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cystatin S, from human whole saliva.";
STRAIN=Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew; HGNC:2474; CST2.

    -!- SIMILARITY: Belongs to the cystatin family.

                                   NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                        Thiol
                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00287;
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                                                                                                                                                                                                                                                                              l Similarity
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                                                                                                  precursor.
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                                                                                                            (Rel. 40, Created)
(Rel. 40, Last sequence up
(Rel. 41, Last annotation
                                                                         cuniculus (Rabbit)
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                                                Lagomorpha; Leporidae; Oryctolagus
                                                               Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                 16445
                                                                                                                                                                                                                                                                                           32.0%;
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TISSUE=Bone
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                                                                                                                                                                                                                                                                                                                                                                                                                      Signal; Multigene
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REACTIVE
                                                                                                                                                                                                                                                                                            Score 74.5;
Pred. No. 0.
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                                                                                                                                                                                                                                                                               Mismatches
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ACT SITE
SITE
                                                                                                                                            STRAIN-129/Sv: TISSUE-Liver,
MEDLINE-95137392; PubMed-7835704;
Huh C., Nagle J.W., Kozak C.A., Abrah
Huh C., Nagle J.W., Kozak C.A., Corah
SEQUENCE FROM N.A. STRAIN=ILS, and IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-1991 (Rel. 18,
01-FEB-1996 (Rel. 33,
10-OCT-2003 (Rel. 42,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genes Cells 3:459-475(1998).
-!- FUNCTION: This is a thiol proteinase inhibitor.
-!- SIMILARITY: Belongs to the cystatin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Large scale iso method involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P21460;
01-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYTC MOUSE
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Kawashima H.;
                                                                                                 Gene 152:221-226(1995).
                                                                                                                                  mouse
                                                                                                                                                                                                                                                                                                                                                   Biochem. Biophys. Res.
                                                                                                                                                                                                                                                                                                                                                                                   Solem M., Rawson C., Lindburg K., Barnes D.; "Transforming growth factor beta regulates c mouse embryo (SFME) cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=BALB/c; TISSUE=Brain;
MEDLINE=91054522; PubMed=2241983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
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Kobori M., Ikeda Y., Nara H., Kat
                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00287;
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                                                                                                                               cystatin-C-encoding
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SM00043; CY; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          le isolation of osteoclast-specific genes by an improved
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(Cystatin 3).
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                                                                                                                           gene (Cst3).";
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CYSTATIN C.

REACTIVE SITE.

SECONDARY AREA OF CONTACT.

BY SIMILARITY.

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1; Mismatches
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Pred. No. 0.0082;
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RX MEDLINE=2238.237; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Whiting M., Madan J.W., Green E.D., Dickson M.C.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Blakesley R.W., Touchman J.W., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Willalon and initial analysis of more than 15,000 full-length human and mouse cDNA sequences ",
Proc. Natl. Acad. Sci. U.S.A. 99:1689-16903 (2002).

1. FUNCTION: As an inhibitor of cysteine proteinases, this protein is cregulator of this enzyme activity.

1. Similarity: Belongs to the cysteine family.

1. Similarity: Belongs to the cystein family.
                                                                Query Match
Best Local S
Matches 16
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ACT SITE
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DISULFID
DISULFID
                                                                                                                                                      CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M59470; AAA63298.1; -. EMBL; U10098; AAB41056.1; -. EMBL; AF483486; AAL90760.1; EMBL; AF483487; AAL90761.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ehringer M.A., Thompson J., Conroy O., Xu Y., Yang P., Canniff J., Beeson M., Gordon L., Bennett B., Johnson T.E., Sikela J.M.; "High-throughput sequence identification of gene coding variants within alcohol-related QTLs.";
                                                                                                                                      SEQUENCE
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HSSP; P01034; 1G96.
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Pfam; PF00031; cystatin;
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; AF483486; AAL90760.1
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; BC002072; AAH02072.1
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Search completed: March 23, 2004, 17:11:07 Job time: 5.42259 secs

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Q80972 mus musculu
Q904821 mus musculu
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Q90412 rattus norv
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RESULT 2
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ID Q8K5
AC Q8K5
DT 01-0
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Q8WXU6
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Best Local Similarity
Matches 48; Conserv
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Q8WXU6;
Q1-MAR-2002
01-MAR-2002
01-JUN-2003
Q8K5A3;
Q8K5A3;
01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                     Hamil K.G., Liu Q., Zhang Y.-L., French F.S., Hall S.H.;
"SC13: A novel epididymal specific member of the cystatin family.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF335480; AAL71991.1; -.
GO; GO:0004869; F:cysteine protease inhibitor activity; IEA.
InterPro; IPR000010; Cystatin.
Pfam; PF00031; Cystatin; 1.
SMART; SM00043; CY; 1.
SEQUENCE 138 AA; 16506 MW; E49440ACA3585C64 CRC64;
                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
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                                                                                                 100.0%; Score 273; DB 4; ilarity 100.0%; Pred. No. 7.9e-30; Conservative 0; Mismatches 0;
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RESULT 4
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Q9CX46;
Q9CX46;
01-JUN-2001 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
8030411F24Rik protein.
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01-MAR-2002
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Hamil K.G., Hall S.H.;
submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF501290; AAN21709.1; -.
GO; GO:0004869; F:cysteine protease inhibitor activity;
InterPro; IPR000010; Cystatin.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. Hamil K.G., Liu Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L; AF335481; AAL71992.1; -.
GO:0004869; F:cysteine protease inhibitor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF00031;
                                                                                                                                                                                                                                                                                                                                            48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                   27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . Similarity
27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                     MQWTTCQKPETTNCVPQERELH-------KQVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEMORTICLKIEKNICNVQEGELHKQIQCYFSVYVIPWLEVFKMLKK 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VEMOWITICOKPETTNCVPQERELHKOVNCFFSVFAVPWFEQYKILNK 48
                                                                                                                                                                                                                                                                                                                                       LQWITDQYNKES-----DDKYHFRIFRVLKVQRQQVNCFFSVFAVPWFEQYKILNK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. 20, (TrEMBLrel. 20, TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               139 AA;
                                                                                                                                  (TrEMBLrel. 17, (TrEMBLrel. 17, (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Human) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cystatin;
AA; 1228
                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhang Y.-L., French F.S., Hall S.H.; idymal specific member of the cystati) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16686 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                45.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW.
                                                                                                                                  Created)
Last sequence update)
Last annotation update)
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Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                            Score 125; DB 4; I
Pred. No. 1.7e-09;
6; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 151; DB 11;
Pred. No. 5.8e-13;
6; Mismatches 14;
                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; F
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05DD92C47387B022 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E1E36DB786B4D08C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 103;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cystatin family.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      139;
                                                                                                                                                                                                                                                                                                                                                                                                                              16;
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RESULT 5
GWVI3
ID QBVI
AC QBVI
AC QBVI
DT 01-M
DT 01-M
DT 01-G
GWI3
GWW
BO30
OS Mus
OC Euka
OC Mamm
OX WGBI
RN [1]
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RN [1]
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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl R., Turuno M., Aono H., Baldarelli R., Barsh G.,
A Schriml L.M., Staubli F., Suzuki R., Tonita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Sakai K., Okido T., Furuno M., Aono H., Gariboldi M.,
A Sakai K., Okido T., Furuno M., Aono H., Gariboldi M.,
A Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Lyons P., Marchiomni L., Mashima J., Mazzarelli J., Mombaerts P.,
A Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Buzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Hayashtyski Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Hayashtyski Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local
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01-MAR-2002
01-JUN-2003
                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                            STRAIN=C57; TISSUE-Testis;
Li Y., Friel P.J., Griswold M.D.;
"Molecular cloning and characterization of cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cystatin SC.
8030411F24RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q8VII3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 409:685-690(2001).
EMBL; AK020193; BAB32024.1;
HSSP; P01034; 1G96.
   SEQUENCE
                        Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
                                                                                                                                              MGD;
                                                                                                                                                                                                        TE-1, new members of the cystatin Submitted (OCT-2001) to the EMBL/
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8VII3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                             GO; GO:0004869; F:cysteine protease
                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hayashizaki Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000010; Cystatin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Functional annotation of a full-length mouse cDNA collection.";
                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO:0004869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGI:1925859; 8030411F24Rik.
GO:0004869; F:cysteine prote
                                                                                                                                              MGI:1925859; 8030411F24Rik.
                                                                                                                                                                             AF440735; AAL30841.1;
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18; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DLEMGRTICKKHDENIHNCPLLQGSREKKVHCVFQVDARPWFSHFTIL 123
                                                                                     IPR000010; Cystatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
   130 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
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   15076 MW;
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37.5%;
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                                                                                                                                                                                                        EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 81; DB
Pred. No. 0.00
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
   DD34930B64AFE58F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DD2F930B64B4E584 CRC64;
                                                                                                                                                                                                                                          family.
                                                                                                                   inhibitor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                      activity; IEA
                                                                                                                                                                                                           databases
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Query Match Best Local S Matches 18

l Similarity 18; Conserv

Conservative

29.7**%**; 37.5**%**;

; Score 81; DB ; Pred. No. 0.00 8; Mismatches

0.0026

DB 11;

Length

130;

Indels

2

Gaps

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NVEMOWTTCQKPETT--NCVPQERELHKQVNCFFSVFAVPWFEQYKIL

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A Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,

Kilausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,

Schapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Milland M., Tuchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Krzywinski M.I., Skalska U., Smailus D.E., Schmerch A., Schein J.E.,
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Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q80Y72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF442205; AAL35350.1; -.
GO; GO:0004869; F:cysteine protease inhibitor activity;
InterPro; IPR000010; Cystatin.
Pfam; PF00031; cystatin; 1.
SMART; SM00043; CY; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular cloning and characterization of cystatin SC TE-1, new members of the cystatin family."; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=Sprague-Dawley; TISSUE=Testis; Li Y., Friel P.J., Griswold M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cystatin SC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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Last sequence update)
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Pred. No. 0.0067;
9; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; I
Sciurognathi; Muridae;
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RESULT 9
Q9DAP1
ID Q9DA
AC Q9DA

Q9DAP1;

PRELIMINARY;

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RESULT
Q9EPX9
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                                                                                                                                Matches
                                                                                                                                                            Query Match
Best Local
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01-MAR-2001
01-JUN-2003
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InterPro; IPR002243; Cystatin_C/M.
Pfam; PF00031; Cystatin; 1.
ProDom; PD001231; Cystatin_C/M; 1.
SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3MBL; PO1034; 1G96.
HSSP; PO1034; 1G96.
GO; GO:0004869; F:cysteine protease
GO; GO:0004869; F:cysteine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   autocrine/paracrine cofactor."; Neuron 28:385-397(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                VARIANT
                                                                                                                                                                                                                                                                                                                                  VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21010502; PubMed=11144350; Taupin P.J., Ray J., Fischer W.H.,
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                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00287; CYSTATIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00031; cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "FGF-2-Responsive neural stem cell
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85
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                                                                                                                             Similarity
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                                                           NVEMOWTTCQKPET -- TNC-VPQERELHKQVNCFFSVFAVPWFEQYKILN
DVEMGRTTCTKSQTNLTDCPFHDQPHLMRKALCSFQIYSVPWKGTHSLTN
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                                                                                                                                                                                                                                                             84
140 AA;
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                                                                                                                                                        28.0%;
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24,
                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                      CYSTATIN C.
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                                                                                                                         Score 76.5; D
Pred. No. 0.01
ll; Mismatches
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Pred. No. 0.01;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                             3A563406DD58D785 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proliferation requires CCg, a novel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inhibitor activity; IEA
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                                                                                                                                                                                           Length 140;
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RESULT 10
Q80ZNS
D080ZN
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DT 01-JI
DT 01-O
DE RIKE
OC RIKE
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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
A Kadota K., Watsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Watsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl R., Catholi F., Suzuki R., Tonita M., Wagner L., Washio T.,
A Schriml L.M., Staubli F., Suzuki R., Tonita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aonon H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Sakai K., Okido T., Furuno M., Aonon H., Gariboldi M.,
A Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Blake J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Blake J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Blake J., Bult C., Hansann M., Hume D.A., Kamiya M., Lee N.H.,
A Blake J., Baso K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
A Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
A Wanshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
A Wanshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local :
Strausberg R.;
Strausberg R.;
Strausberg R.;
Strausberg R.;
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ (EMBL);
EMBL; BC046681; AAH48681.1; -.
GO; GO:0004869; F:cysteine protease inhibitor InterPro; IPR000010; Cystatin.
InterPro; IPR003243; Cystatin_C/M.
nfam. PP00031; Cystatin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q80ZN5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AK005665; BAB24175.1; -. HSSP; P01038; 1CEW. MGD; MGI:1916544; 1700006C19Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2003
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000010; Cystatin. Pfam; PF00031; Cystatin; 1. SMART; SM00043; CY; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2001
                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                               RIKEN cDNA 1700006C19 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                        TISSUE=Testicle;
                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30; GO:0004869; F:cysteine protease inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 409:685-690(2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Functional annotation of a full-length mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hayashizaki
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VNIARTMCKKVAGDNENCLFQQDPKMKKMVFCIFIVSSKPWKFELKMLKK 136
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(TrEMBLrel. 24, Last sequence update)
(TremBLrel. 25, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
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Rodentia;
                                                                                                                                                                                                                                                                                                                                            Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                        Chordata;
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34.0%;
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Last sequence update)
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                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                                                                                                       activity;
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                                                                                                          IEA
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Q8VII2
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Q7Z4J8
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  Matches
                                      Query Match
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01-MAR-2002
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

KAININE N., Chen X., Rolfs A., Halleck A., Hines L., E
KAININE N., Chen X., Rolfs A., Halleck A., Hines L., E
KOUNDAINS M., Raphael J., Moreira D., Kelley T., LaBae
KOUNDAINS M., Raphael J., Moreira D., Kelley T., LaBae
Phelan M., Farmer A.;
Submitted (AUG-2003) to the EMBL/GenBank/DDBJ database
EMBL; BT09885; AAP88827.1;
SEQUENCE 167 AA; 18857 MW; E339025A5BD60177 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProDom; PD001231; Cystatin_C/M;
SMART; SM00043; CY; 1.
SEQUENCE 141 AA; 16825 MW; (
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01-OCT-2003 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
                                                                                                       Pfam; PF00031; cystatin; 1. 
SMART; SM00043; CY; 1.
                                                                                                                                                               EMBL; AF440736; AAL30842.1; -.
GO; GO:0004869; F:cysteine protease inhibitor
                                                                                                                                                                                                          TE-1, new members of the cystatin family."; submitted (OCT-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                              STRAIN-Sprague-Dawley; TISSUE-Testis;
Li Y., Friel P.J., Griswold M.D.;
"Molecular cloning and characterization of cystatin
                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8VII2;
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                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q7Z4J8;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Cystatin TE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10116;
                                                                                                                                                nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12
                   Local
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  17; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEMOWITCOK -- PETTNCV-POERELHKOVNCFFSVFAVPWFEQYKILNK
                                                                                                                                                IPR000010; Cystatin.
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  Conservative
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                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Primates;
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                                                                                   15152 MW;
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                   23.8%;
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Last annotation update)
Score 65; DB
Pred. No. 0.42
7; Mismatches
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Pred. No. 0.29
L2; Mismatches
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Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vo
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C20FA0D8A884951F CRC64;
                                                                                   BC158982F5EDA535
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                                        DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vertebrata;
                     . 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                            databases
                                                                                                                                                                   activity; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 167
                                        Length 128
                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LaBaer
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    Indels
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; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eisenstein
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                                                                                                                                                                                                                                                     cystatin
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S:,
    Gaps
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RESULT 14
Q775XK
AC Q75XK
AC Q75XK
DT 01-0C
DT 01-0C
DT 01-0C
DT 01-0C
DT 01-0C
DT 01-0C
CC Euka
OC Euka
OC Cypr
OX NCBI
RP SEU
RP SEU
RC STEU
RC STEU
RA Kla
RA Hot
RA Dia
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 15
STRAINAB; TISSUE=Booy;
STRAINAB; TISSUE=Booy;
STRAINAB; TISSUE=Booy;
STRAINAB; TISSUE=Booy;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Strausberg R.L., Colline F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Klausner R.D., Colline F.S., Wagner L., Schaefer C.F., Bhat N.K.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Piarchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
                                                                                                                                                                                                                                                 Q7SXK6
Q7SXK6;
01-OCT-2003
01-OCT-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9JM84
Q9JM84;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.
EMBL; AB036743; BAA95411.1; -.
EMBL; BC048364; AAH48364.1; -.
HSSP; P01034; 1G96.
MGD; MGI:1930004; Cst10.
GO; GO:0004859; P:cystatine protease inhibitor activity; IEA.
InterPro; IPR000010; Cystatin.
InterPro; IPR0001713; StefinA.
Pfam; PF00011; Cystatin; 1.
                                                                                                                                                                            Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
Cyprinidae; Danio.
                                                                                                                    SEQUENCE FROM N.A.
STRAIN=AB; TISSUE=Body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0295; STEPINA.
SMART; SM00043; CY; 1.
SPOSITE; PSO0287; CYSTATIN; 1.
SEQUENCE 148 AA; 16451 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Salivary gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "DD72, a novel mouse ossification.";
                                                                                                                                                                                                                                   Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (JAN-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CST10 OR DD72.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DD72 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
                                                                                                                                                              TaxID=7955;
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                                                                                                                                                                                                                                                                                                                                                                                IELGRTTCTKTESNLVDCPFNEQPDQQKRVICNFQINVAPWLNKMSMTN 142
                                                                                                                                                                                                                                                                                                                                                                                                        VEMQWTTCQKPET--TNCVPQER-ELHKQVNCFFSVFAVPWFEQYKILN
                                                                                                                                                                                                                                               (TrEMBLrel. 25, (TrEMBLrel. 25, (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nakamura
                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 15, Created)
(TrEMBLrel. 15, Last sequence update)
(TREMBLEL 24, Last annotation update)
(Similar to cystatin 10) (Chondrocytes).
                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Chordata; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     23.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene implicated in the early stage of ectopic
                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 64.5; DB Pred. No. 0.56; O; Mismatches
                                                                                                                                                                                  ) (Danio rerio).
; Craniata; Vertebrata; Euteleostomi;
Teleostei; Ostariophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 637534CBFC5AA179 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                             RP SEQUENCE FROM N.A.

RC STRAIN=C57BL/6J; FubMed=11217851;

RX MEDILINE=21085660; PubMed=11217851;

RX MEDILINE=21085660; PubMed=11217851;

RA Arakawa T., Hara A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Pukunishi Y., Kondo S., Yamanaka I.,

RA Arakawa T., Hara A., Pukunishi Y., Kondo S., Yamanaka I.,

RA Arakawa T., Hara A., Pukunishi Y., Kondo S., Yamanaka I.,

RA Azakawa T., Hara A., Pukunishi Y., Kondo S., Yamanaka I.,

RA Kudota K., Matsuda H.A., Ashburner M., Batcalov S., Casavant T.,

RA Kudota K., Matsuda H.A., Ashburner M., Batcalov S., Casavant T.,

RA Kudota K., Matsuda H.A., Ashburner M., Batcalov S., Casavant T.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Sakait K., Okido T., Furuno M., Aono H., Baldarelli R., Bareh G.,

RA Brownstein M.J., Bult C., Pletcher C., Fujita M., Gariboldi M.,

RA Brownstein M.J., Bult C., Pletcher C., Fujita M., Gariboldi M.,

RA Brownstein M.J., Bult C., Pletcher C., Fujita M., Gariboldi M.,

RA Hynshait H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Sazaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Andraka H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
1700006F03Rik protein (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Fahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A., Fahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A., Fahey J., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M., Butterfield Y.S., Tones S., Marin M. N., Shailus D.E., Schnerch A., Schein J.E., Tones S., Marin M. N., Shailus D.E., Schnerch A., Schein J.E.,
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SEQUENCE FROM N.A.
STRAIN=C57; TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9DAN8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical protein. SEQUENCE 314 AA; 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9DAN8
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                                                                                                                                                               Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1700006F03RIK.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
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15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 17, (TrEMBLrel. 17, CTEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Body;
                                                                                                                                 annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36803 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23.3%;

    17, Last sequence update)
    24, Last annotation update)
    (Cystatin TE-1).

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                                                                                                                             a full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
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Pred. No. 1.7;
5; Mismatches
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